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THE BLACKSMITH

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ARTISAN WITHIN THE EARLY COMMUNITY

Foreword by Blanche K. Reigle
Introduction by John D. Tyler
Edited by Vernon S. Gunnion
Carroll J. Hopf

PENNSYLVANIA FARM MUSEUM OF LANDIS VALLEY

THE BLACKSMITH

AN EXHIBITION OF HIS WORK AT . . .

THE PENNSYLVANIA FARM MUSEUM OF LANDIS VALLEY, 1972-1973

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FORE WORD

The collection of antiques has become an avid interest pursued by thousands of Americans. Some are prompted by the urge to speculate, others are encouraged by their natural interests in specific subjects; many simply wish to enhance the decor of their homes with so-called "conversational pieces." But very few in our time collect for the same reason as Henry and George Landis, bachelor brothers of Landis Valley, Lancaster County, Pennsylvania. It is to these two men that this catalog is dedicated.

The Landis brothers were selfless men with exceptional curiosity. As small boys, they were curious about the way people lived and worked during the founding days of this nation. They were rural children who had had the unusual privilege of an advanced education. Before their formal schooling was accomplished, they had already begun to collect American antiques that were to become the nucleus of the Landis Valley Museum.

Late in the nineteenth century, Henry and George were considered a bit unusual by their rural neighbors as they drove home repeatedly from country sales with their horse-drawn wagon loaded with "another pile of junk." The country folk shook their heads in awe to think of spending good money on the things that people were then discarding as trash. But the Landis brothers were men of vision, and "the loads of junk" were earmarked to enlighten future generations on the folk art, the agricultural methods, and the general history of the area in which they had been reared.

The dreams of the Landis brothers were realized when they opened their private museum to the public in 1925. For about fifteen years they invested their money and energies in the promotion of this educational institution, but the challenge outgrew their bankroll as well as their physical capacities. As they advanced in age, George and Henry began to worry about the perpetuation of the work to which they had dedicated their lives.

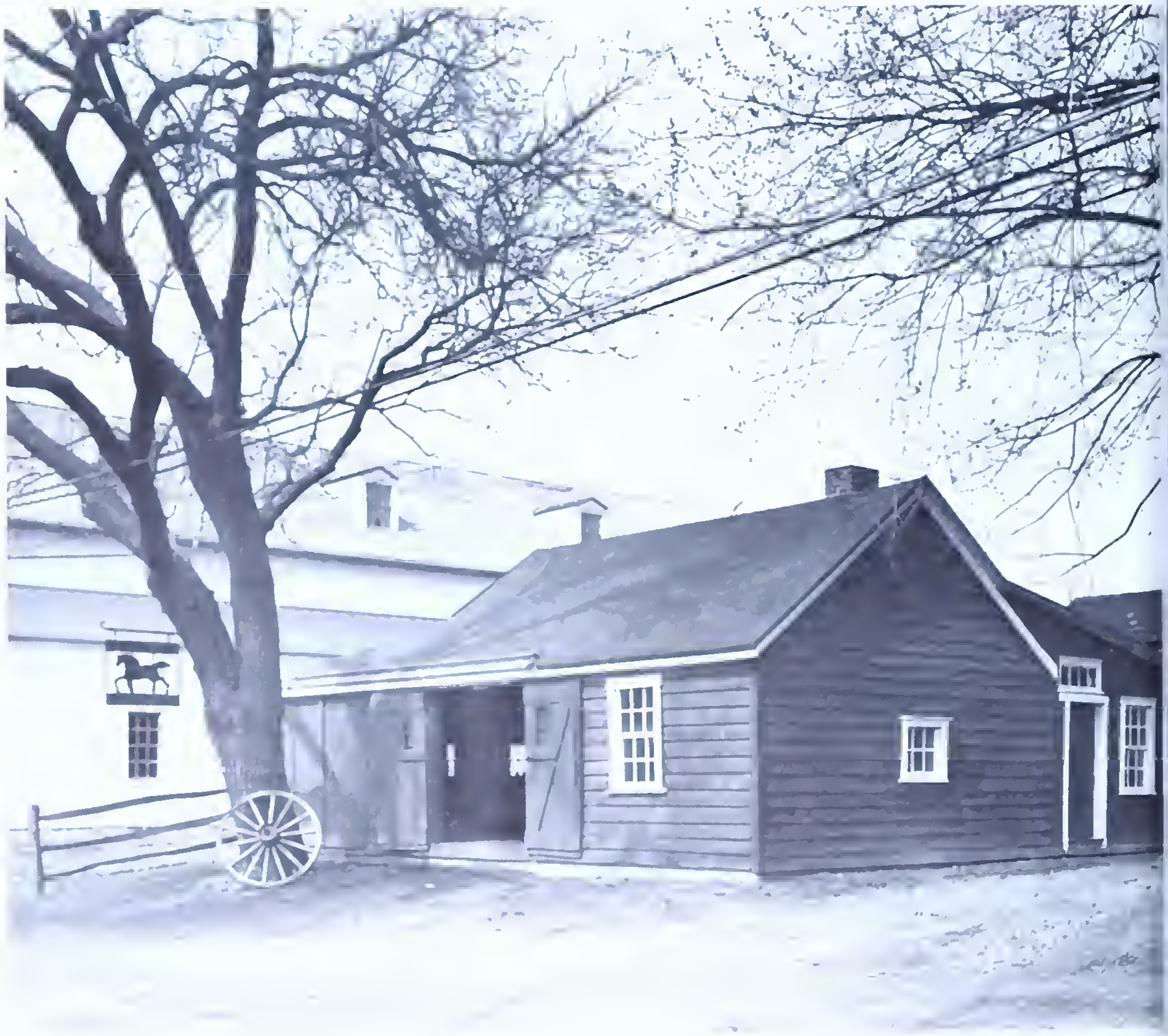
It was then that the Carl Schurz Foundation, an organization which seeks to promote German culture in this country, came to the rescue. The foundation, administering the funds of the Oberlaender Trust, constructed several exhibit buildings and administered the Museum for a decade. After the Oberlaender Trust was liquidated in 1951, the Landis brothers were once again faced with the question, "What will happen to our collection?" It was then that they appealed to the Commonwealth of Pennsylvania to take over the Museum. After two years of legislation and with the special support of Norman Wood, a member of the House of Representatives, this was accomplished in 1953. Since that time the Museum has been administered by the Pennsylvania Historical and Museum Commission under the new name, the Pennsylvania Farm Museum of Landis Valley.

High on the list of the Landis brothers' interests were the tools and products of early craftsmen. Their great collection of both functional and decorative ironwork is mute testimony to the esteem in which they held the blacksmith. The many beautiful hinges, hasps, locks, and latches meet the visitor's eye in almost every building of the Museum complex. Once again the pieces have been put into service for the purpose for which some skilled artisan created them. Less recognizable among the products of the blacksmith-artisan are the many and varied functional iron pieces that went into the manufacture of farm vehicles and implements. The lowly plow was turned into a labor-saving device by the graceful shaping of the moldboard. The Conestoga Wagon, which traveled this area from 1750 to 1850, would have been only a wagon maker's dream were it not for the durability of the many important iron appurtenances which went into its assembly. Plates, pins, hooks, chains, and clevises worked silently under the running gear of the wagon, while beautifully fashioned and exposed hinges, hasps, axe-holders, and tongue bands demonstrated more graphically the artistic skill of the blacksmith.

Only a small percentage of the Landis brothers' collection is on special exhibition for this show. One will have to tour the Museum and search carefully for the hundreds of functional iron parts which added to the strength and efficiency of the tools and implements which contributed to the settlement of this part of Pennsylvania.

Blanche K. Reigle, *Director*
Pennsylvania Farm Museum of Landis Valley

The J. W. Epley Blacksmith Shop originally was located just outside of Gettysburg, Pennsylvania, and was removed to the Pennsylvania Farm Museum of Landis Valley in 1968. Mr. Epley was master farrier at the Hanover Shoe Farms stables and proprietor of this shop in the early decades of this century.



INTRODUCTION

In an age when virtually every item needed by man can be had ready-made from store or factory, it is somewhat difficult to imagine the need for and reliance on the blacksmith by the rural community of two hundred years past. To our forefathers the smith combined the work of the welding shop, the service station, and the hardware store in one man. Every community, however small, had need of one, and as a result there were greater numbers of smiths than of any other craftsmen during the eighteenth and nineteenth centuries. A glance at some early Philadelphia city directories will demonstrate the prevalence of the blacksmith. More blacksmiths may be found than any other worker in metal.

Biringuccio mentioned in 1540 that "there is no one whom this art does not serve."[1] All men, down to the advent of the late factory era after the Civil War, had need of the smith's knowledge, talents, products, and services.

There was a blacksmith, James Read, at Jamestown in 1607. Many others were to follow him to these shores over the years. Bringing with them the traditions of craftsmanship and design of their homelands, they settled in the cities, in the farmlands, and on the frontier. Their products were badly needed in all areas.

In the cities the blacksmith trade tended to fragment into many different branches. In Philadelphia in 1774 there were fifty-two "smiths" comprising farriers, ornamental iron workers, whitesmiths, coppersmiths, shipsmiths, boatsmiths, axe and hoe makers, gunsmiths, locksmiths, and tinsmiths, to name but a few. All worked in metals. Craftsmen in the urban environment tended to specialize. Often they rented rather than owned their shops, and living quarters were usually over the shop, which was located at street level.

It is with the rural smith that we are more concerned. He was a very small businessman, usually with a family to support. He tended to work alone or with one helper. He didn't employ several apprentices as did his city cousin. He may have been trained by his father to the trade, or may have begun as an apprentice or helper to the local blacksmith. Whatever his training, when he became a full-fledged smith he took his place as an important member of the early farm community. In the earlier period the smith was blacksmith first and farrier, or horseshoer, second. During the latter half of the nineteenth century this was reversed, so that today we think of the blacksmith as the man who shoes horses under the spreading chestnut while the school children gather to catch the rings made from horseshoe nails. This stereotype came about, as will be seen, from effects of the factory system upon the work of the smith.

The blacksmith shop was a center of news swapping and a place of entertainment for the early community. It was dim and ill-lit on purpose so that the smith could better see the color of the metal he happened to be working. George Sturt, writing of his family's wheelwright shop in England in the late nineteenth century, mentioned:

> Excepting for light through the open half-door, or from the window over the bench and vise, the smithy was kept pretty dark. Will Hammond preferred it so. If the skylight did admit a splash of sunshine, as it sometimes tried to do on summer noons, he was prompt to veil it with an old sack he kept nailed for that purpose to the sooty rafters. The sunshine, he said, put his fire out; and very likely it did affect the look of the "heat", so all important to a blacksmith.[2]

Within the dim recesses of the shop were made all the various implements and utensils needed in a newly settled land. The work of a typical country smith was listed by Henry B. Plumb of Luzerne County, Pennsylvania, in the 1880's in an awesome tally:

> As to tradesmen, the blacksmith stood at the head of all in this

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[1] Biringuccio, Vannoccio, *Pirotechnia* (Cambridge, Mass.: M. I. T. Press, 1966), p. 371.

[2] Sturt, George, *The Wheelwright's Shop* (Cambridge, England: University Press, 1963), p. 164.

> new country. Almost everything made of iron was made by him. He made the plows of wood and sheathed with iron. He ironed off the wagons and carts. He made scythes, reaping hooks, axes, knives in general, chisels, drawing knives, shears, sheep shears, garden hoes, grub hoes, spades, shovels of all kinds, hammers, rakes, harrows, pitchforks, stable forks, andirons, flatirons, door handles, latches, hinges, locks, cowbells, shod horses and oxen, made the irons of hames and harness, steel for flint and steel, iron lamps for burning lard, nails of all kinds, griddles, tongs, pokers, sled-shoes, chimney cranes, pot-hooks, cranks for grindstones, spinning wheels, spindles, chains and thousands of other things.[3]

This is an extensive list, but by no means all-inclusive.

The smith combined "the strength of a bull with the quick eye of the fox" and his products often showed the skill and sensitivity of an artist.[4] There was a certain art involved in the shaping of a piece of wrought iron. Patience was needed to bring an article to completion in such a manner as to be finished with the hammer and not the file, wherever possible. It was reckoned most unprofessional to have to finish a large piece, such as a barn door hasp, with the file, which both wasted time and indicated that the smith hadn't talent enough to shape it under the hammer to the precise form needed. However, smaller items, such as latches, flesh forks, etc. had to be filed.

The techniques used by the smith were traditional ones added to by the experience of each man, and varied according to the perceptiveness of each. Some learned no more than their apprenticeship days had taught them; others continued to learn by observing the reactions of the metal as they worked it and reasoning how and why it acted as it did. These men would experiment and learn until they became superb artists in iron, creating the beautiful artifacts which we admire, but can scarcely hope to see duplicated today.

The hours in the smith's day were long and hard. Biringuccio, writing in 1540, summed up the rigors of the blacksmith's day in terms that probably applied equally well to the eighteenth or nineteenth centuries:

> The task of the smith who works in iron is very laborious . . . For he . . . handles heavy weights continually, and stands constantly erect before the fire of the forge, since the hardness of the iron cannot be softened except by means of heating and boiling it well. In this place he continually moves his body, now thrusting the iron into the heart of the fire with large thick tongs, now removing it to look at it and to put sand, tuff, or other earth over it, now putting on fresh charcoal, now moistening and slowing down the fire, and now cleaning it. Finally, while the iron is hot he strikes with powerful mallets and heavy hammers, as you see, and brings it to whatever end he wishes to make of the work. As you can understand, the unhappy workmen are never able to enjoy any quiet except in the evening when they are exhausted by the laborious and long day that began for them with the first crowing of the cock. Sometimes they even fall asleep without bothering about supper.[5]

Though there might be several varieties of smiths, all "working by the same Rules, tho' not with equal exactness, and all using the same Tools tho' of several Sizes . . . ," as Moxon noted in 1703, the material employed in the craft was everywhere the same.[6] It might be converted into steel, or hammered into forms that seemed unusual for it, but it always originated as wrought iron.

The blacksmith procured his metal from the water-powered triphammer forge. He acquired it in bar or rod form, even as mild steel is purchased today by the few practicing smiths that are left. This wrought bar iron had begun its life as crude ore, mined laboriously from the earth and smelted in primitive charcoal-fired stone blast furnace stacks. There were many such blast furnaces in Pennsylvania during the eighteenth and nineteenth centuries. The ore was melted down and cast into pigs, large bars of cast iron that were crystalline in structure and too brittle to use as they stood. The pigs were taken to hammer forges, located along the many streams of the State, and there further worked and melted into lumps or blooms. The blooms were then put under the hammer, weighing several hundred pounds, and forged out into bars of tough, resilient wrought iron. The finished product differed from the cast pig iron in that it was now softer, contained less carbon, and had acquired a longitudinal fibrous grain from the extended hammering. It was now suitable for the smith to rework into tools, machinery parts, or household implements. It had great tensile strength and resistance to rust.

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[3] Fletcher, S. W., *Pennsylvania Agriculture and Country Life 1640-1840* (Harrisburg: Pennsylvania Historical and Museum Commission, 1971), p. 455.

[4] Smith, H. R. Bradley, *Blacksmiths' and Farriers' Tools at Shelburne Museum* (Shelburne, Vt.: Shelburne Museum Inc., 1966), p. 8.

[5] Biringuccio, *Pirotechnia*, pp. 369-370.

[6] Moxon, Joseph, *Mechanick Exercises* (New York: Praeger, 1970), Preface.

In later years, after the 1840's, the smith probably obtained his bar iron from the rolling mill, which supplanted the triphammer forge at roughly that date. The metal had the same characteristics, however. It was made from iron smelted with charcoal as a fuel and was known for its high quality. Today, such iron is available only from Sweden at high prices, and most smiths must be content to use mild steel. Steel is a fine material, but it lacks the fibre of the older metal, nor does it work with as much ease. Although tougher in some respects, it will not stand the twisting or strain for which wrought iron was renowned.

The collector of wrought-iron artifacts should be especially aware of the longitudinal fibre found in the products of the smith. If an item is offered for sale that lacks such fibre, and is granular instead of being fibrous, one may safely assume that it is late, possibly downright recent in origin. Such pieces are generally made of mild steel, and will ring when hit with another iron object. This is not to say that some older products of the smith were not made of steel, for many were, especially items that had to have a fine finish, or were of delicate form. These, because they were "steeled" by the smith, will ring also. However, they, like the wrought iron, will have a fibrous structure since they were converted into steel from wrought iron by the smith.

It might be well to examine at this point the relationship of the whitesmith, or worker in steel items and those of polished finish, to the blacksmith. *The Oxford English Dictionary* gives the primary meaning for the term whitesmith as a worker in white iron, or a tinsmith. A secondary definition is that of a polisher or finisher of metals, as distinguished from one who forges them. Albert Sonn, in his three-volume work on wrought iron, says that the whitesmith was a worker in white metal or tin and was also a finisher or galvanizer of iron. As early as the fourteenth century in England we find references to ironwork used on the exteriors of buildings being galvanized, or whitened, by dipping in tin. Hinges were frequently tinned to protect them from the elements.

Other sources indicate that the whitesmith also repaired edged tools and weapons. An English gazetteer for Staffordshire published in 1778 mentions Swindon as "one of those places which have blade-mills, where scythes, axes, reaping-hooks, &c. after being prepared for it by the whitesmiths, are ground to a fine edge."[7]

Other advertisements, such as those reproduced in *Early American Ironware*, by Henry J. Kauffman, indicate that the whitesmith was a worker in well-finished products of steel, as well as edged tools and weapons such as knives, tomahawks, razors, and the like. It is as a worker in steel, and necessarily as a polisher of the finished product, that the whitesmith is found in America. That such work was often done by one man who could be called a blacksmith when making one item and a whitesmith when working on another should be taken for granted. Such smiths were among the most highly talented of their tribe, as will be seen from a close examination of some of the artifacts illustrated in this catalog.

One source quoted in the Oxford dictionary mentions a character in a book as saying: "I arn't a blacksmith, I'm a whitesmith, and work in steel."[8] The advertisement reproduced by Mr. Kauffman on page 80 of his book relates that Hamilton Hazleton, a whitesmith on the road between Carlisle and Shippensburg, makes "all kinds of Truss for the Rupture, Trepanning instruments, Tooth drawers, and all kinds of Doctor's instruments—likewise Lock making, Spindles and handles for Spinning Wheels . . ."[9] This was in 1798. A closer look at the products of Hazleton will reveal that all are steel, or steeled wrought-iron articles. The sugar cutters, seam cutter, and pie crimper illustrated in Plates 9, 19, and 20 were made of finely finished steel, and are typical of the sort of artifact that called for a more expert hand in the making than the normal hearthside objects made by the blacksmith.

Perhaps the term whitesmith became general for workers in steel because of the color of the metal. When polished it is of a dull silver shade. Also, it is white on the interior. "Good steel . . . is silver-white, and is so hard that it will scratch pane-glass, and even a file."[10]

It would be foolish to lay down any hard and fast statements about the whitesmith-blacksmith question. It is apparent that the whitesmith was a worker primarily in steel, that he polished his product, which was often delicate in nature, and that he frequently coated it with tin. Such work may have taken place in the same shop with a blacksmith, each man doing a certain part of the work. Doubtless there were some who specialized in whitesmith work, and others who did a little in conjunction with the normal blacksmith trade. In the rural areas it was usual for one man to make a variety of objects for farm and home. The craft of the smith was tied to the life on the farms surrounding his shop; his goods were plain, and reflected the needs of the community. Here and there whitesmiths, such as Hamilton Hazleton, could be found supplying those cleverly wrought items that were beyond the talents of the average blacksmith.

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[7] *The Oxford English Dictionary* (Oxford: Clarendon Press, 1961), XII, 80 (Wh).

[8] *Ibid.*

[9] Kauffman, Henry J., *Early American Ironware* (Rutland, Vt.: Charles E. Tuttle Co., 1966), p. 80.

[10] Overman, Frederick, *The Manufacture of Steel* (Philadelphia: Moss and Brother, 1854), p. 47.

Some specialization in the blacksmith trade did occur in outlying cities and towns, as well as in Philadelphia. Lancaster and York had a number of smiths who supplied the trading houses of Shippen and Lawrence, Levy and Franks, and Baynton, Wharton and Morgan with iron articles needed for the Indian trade. Some of the most beautiful and intricate hardware produced at York and Lancaster was used on the Conestoga Wagons, the freight carriers of the eighteenth and nineteenth centuries. Lewis Miller, a carpenter of York who recorded in sketches and text the present and past history of his town with color and humor, recorded that ironwork for the wagons was done in the local blacksmith shops, many of which made a specialty of wagon iron. Miller mentioned that "the wagons made in York had a praise, for good work done to them at our place, in the woodwork, and the iron work, done by the black Smith shops."[11]

Probably the best work dealing with the ironing of wagons, even though it relates to an English shop, is *The Wheelwright's Shop*, by George Sturt. In a chapter dealing with blacksmith work involved in the construction of a wagon, Sturt relates the reasons, of long tradition but practical any time, for drawing down the edges of hardware in order to make it lighter, save iron, and give a more finished look. Conestoga hardware and, for that matter, all other items made by the smith demonstrate this tradition. The beveled edges on the pieces shown here are good examples. Another survival of the early time was the traditional decoration with punch and file. Will Hammond, the smith employed by the Sturt shop, could not remember where the designs were learned or whence they originally came. They had been used time out of mind, and some even could be said to resemble Gothic work. He used the few designs he knew and never deviated from them.

Such punched and filed designs will be noted on the wagon hardware shown in Plates 77 and 80. Also, one may note similar designs and handling of decoration on many of the household items pictured. Often the designs are medieval in character, yet the piece may have been made at the turn of the century—such was the hold of the traditional on the imagination of the smith. Of course, a great deal of the design and form was due to the limits placed on the smith by his tools, the file, punch, and swage.

The tools of the blacksmith were many and varied. An inventory of 1363 provides a list of tools that any smith in the nineteenth century would not have been ashamed to own, although he would have added more variety to each sort. Most smiths made their own tools, and the designs of these remained the same for centuries. Tongs and hammers found on sites where iron was worked during the Roman occupation of Britain do not differ significantly from those we know today in basic form and function. The inventory includes an anvil, four sledgehammers, two large hammers, four small hammers, two cutting irons, eight tongs, three nail tools (probably headers), an anvil with two horns, gripping tongs, eight punches, two files, a sprinkler of rushes for throwing water on the fire, a poker, a grindstone, bellows, and tuyère.[12]

With such tools, often crude, a talented smith sometimes attained such skill that we might call him a sculptor in iron. Remember that the blacksmith worked under the most exacting of circumstances. The metal had first to be heated to make it plastic enough to work under the hammer. However, as soon as it was removed from the fire it began to cool, and could thus only be worked for short durations of time before being put back into the fire. The smith, in the short time he had to form an object with hammer and anvil, had to make every blow count, with no mistakes. If he was working an intricate design, as on a latch, he had to know in his mind exactly what form it was to take, and how he should go about making it. He had no time to look at it from different angles, or to take measurements and make a drawing as could the cabinetmaker. His creation of an object of beauty was spontaneous, based in large part on designs of long tradition and familiarity.

According to Seymour Lindsay, there are two fundamental ingredients essential to the makeup of a craftsman. These are the sense of design controlled by an instinctive sense of proportion, and the consideration that nothing is too humble to warrant painstaking work. Frequently the smith had the urge to "endow inconspicuous things with charm."[13] Such an item is the seamcutter shown in Plate 17, or the decorated wedge illustrated in Plate 61.

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[11] Shumway, George, Edward Durell and Howard C. Frey, *The Conestoga Wagon 1750-1850* (York, Pa.: George Shumway and the Early American Industries Association, Inc., 1966), pp. 109, 120.

[12] Salzman, L. F., *Building in England Down to 1540* (Oxford: Clarendon Press, 1967), p. 347.

The blacksmith continued to be jack of many trades throughout most of the nineteenth century. However, the advent of the factory system, beginning in the 1820's and '30's and reaching massive proportions about the time of the Civil War, changed his situation. By mid-century factories had begun to fabricate many of the products formerly made by the smiths. Kitchen utensils, such as ladles, were now stamped out by machine. Knives were made in water- or steam-powered factories, and not hammered out and tempered by the smith in a tedious and demanding process. Implements for the farm could now be purchased from dealers or from the local hardware store.

For a time the system worked for the smith. It kept him supplied with tools, and what he couldn't buy he could make. He could now serve his customers in less time. But then the situation suddenly changed, and by 1900 people were buying at the store the items they had formerly had made by the smith. What remained for the smith was the less lucrative and rather uninspired trade of the farrier—the shoer of horses.

The day-to-day work of a typical smith of the mid-nineteenth century is set forth in the ledger kept between 1852 and 1856 by one S. Thisinger, a smith working at Brushtown, near Huntsdale in Cumberland County, Pennsylvania. Thisinger spent a good deal of his time shoeing horses, and the ledger has frequent entries for "1 remove," or "To 1 new shoe 2 Removes 1 shoe mended," and the like. There are enough of these entries to emphasize the fact that even by the middle of the century a good part of the smith's time was spent in shoeing horses and not in making the utensils and hardware we consider so collectible today. The factory age had begun to make its influence felt; the decline of the individual craftsman was well underway.

Thisinger took payment for many of his jobs in bushels of wheat, corn, or sometimes so many pounds of hogs. Once in a while he was paid in cash, but his neighbors seem to have depended on a barter system to settle debts. There are about fifteen names that occur frequently in the account book, and though it seems incredible, these were the folks who kept him in business, small though the number was.

Much of Thisinger's work was in mending broken tools, or in putting new edges on worn-out blades. Such work required an expert knowledge of the art of tempering, a talent in which not every smith was proficient.

Edward Ruth, one of Thisinger's customers, owned a sawmill and from time to time called on the smith for the repair or renewal of various small pieces of it. On February 6, 1853, he had Thisinger dress and cut a screw for the sawmill. A nut and washer were also made for it. Additionally, nails twelve inches long were made up. Wrought nails (Plate 42) were an ordinary product of the smith, even after the cut nail became commonly available in the early nineteenth century. Wrought nails continued to be used in batten doors in houses up to or past the mid-century mark, since they could be clinched over without breaking. A nail such as the twelve-inch one mentioned was for a specialized use in the large timbers of the mill, and had to be made by hand since such spikes probably were not easily available commercially. Mr. Ruth had numerous other jobs for the smith during that year, among them the mending of a ladle, the shoeing of several horses, and the mending of a stove plate. When he settled his account he paid Thisinger one hog weighing 105 pounds, and was credited at the rate of five cents per pound.

As a final example we shall look at a series of entries in the account with James Irwin, beginning June 6, 1856:

To 12 links & a ring in halter chains	.25
To 10 nails & dress up two pair of hinges for gates	.25
To 1 remove	.08
To sharp 2 shovels, 2 rivets in a cornrake & lay a prong for a plow	.41

And so it went. Despite Biringuccio's description of the Renaissance smith, it may be assumed that the smith did have some moments to make a puzzle for his children, similar to that in Plate 97. Or, with winter approaching, a pull sled was built making it easier to fetch supplies from the store, or wood from the pile. The sled shown in Plate 94 is a fine example of this aspect of the smith's craft.

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[13] Lindsay, J. Seymour, *An Anatomy of English Wrought Iron 1000 to A. D. 1800* (New York: Taplinger Publishing Co., 1964), p. 2.

Household utensils and hardware were among the most important items made by the blacksmith, and are high on the list of collectibles in our day. Probably most in demand but virtually nonexistent as far as most collectors are concerned are the hinges. The cock's head variety and the larger scrolled type used both on interior and exterior doors (Plate 38) are not peculiar to Pennsylvania in design. Similar hinges were used in England during the sixteenth and seventeenth centuries, and were to be found on doors in New England as well as Pennsylvania. The large scroll types have a Gothic flavor and remind one of the larger, more elaborate hinges found on cathedral doors in England and on the Continent.

The chest hinges shown in Plate 39 are reminiscent of English seventeenth-century work, especially in the elaborate punch and file work, and in the cusped ends. Latches, too, indicate a transfer of design between the two countries. The Suffolk latch, having two separate parts joined by the hand grasp, and the later Norfolk type, having the hand grasp joined to a solid back plate, have many antecedents in England. In fact, one might say that a great number of the Norfolk types, common in the late eighteenth and first half of the nineteenth centuries, are English in origin. Most that are seen were made in factories and exported to America in great numbers. Undoubtedly they saved our smiths a great deal of work, but in the final analysis they were one of the objects produced by the factory that contributed to the demise of the blacksmith as a craftsman.

The large central knuckle on the hand grip of the early Suffolk latches was formed by the use of a swage, a block of iron having in it the shape of the knuckle. Inserting this in the hardy hole of the anvil, the smith hammered the iron bar, forming the handgrasp within it until the design was formed between the top and bottom swage. Plates 32 and 34 illustrate this very well.

It should be mentioned that interior and exterior ironwork was not left to rust, nor was it painted black as is the mistaken notion of many who restore old houses today. Hardware was painted the same color as the woodwork surrounding it. The existence of many coats of paint on latches and hinges that were removed long ago and not stripped down bears this out. We have mentioned the tinning of such items in connection with the work of the whitesmith as one way of preventing rust. Another, equally as ancient, was the varnishing or painting of such hardware.

Hearthside utensils are still to be found today, in somewhat better supply than hinges and latches, although they too are naturally much harder to find in good forms now than fifty years ago. An item like the twisted pot hook shown in Plate 6 demonstrates the smith's urge to "endow inconspicuous things with charm," and shows the use of traditional punched and filed decoration, similar in many respects to the wagon hardware.

Forks, ladles, and skimmers can still be found, although not usually bearing the fine decoration noted on the example in Plate 12. The ladle was formed by hammering metal in a cast-iron swage block hollowed to its shape. The shaft is decorated with filed circles and grooves. The handle is flattened to give better stability in the hand, an idea which seems to occur seldom to designers of utensils today. In our world, design for its own sake appears to have supplanted utility, with the result that many of the objects we use are actually inconvenient. Though designed to be "modern," they lack the practical aspects of useful design. The articles made by the village smith were made to be used every day, often many times in one day. They were not consciously designed to be beautiful, but acquired beauty through a natural and traditional evolution.

The upper part of the ladle handle is in the form of a heart, a popular motif with Pennsylvanians. It is formed from punched circles and the use of the file. Many items like this were the work of the whitesmith, who not only filed and finished the ladle, but also tinned it in order that it might remain bright. A close examination of many kitchen utensils will reveal that many of them were tinned at one time, even though most of the tinning will be gone today.

The hanging griddle in Plate 11 points up another tendency of the earlier day which runs counter to ours, that of preserving or saving or repairing things so that they might serve for a while longer. The griddle has a new (sometime ago) handle and swivel welded to the much-worn base.

Many people will recognize the hanging Betty lamp of Plate 27 as an early type of lighting device. However, more will not realize that such lamps were made and used right up until the middle of the nineteenth century. This one probably dates from 1840-1850 and is made of sheet iron very carefully shaped over a form, with the bottom brazed to the sides. The lid is tin and the hook is wrought iron. Such lights were blacksmith-made items, and many exceptionally fine ones will be found to be the handiwork of the whitesmith.

Conestoga wagon hardware provides some of the best examples of truly Pennsylvanian ironwork. Beginning with the set of toolbox hinges and hasp illustrated in Plate 71, a fine and early set, and the set in Plate 73, which harks back to medieval motifs, we can see something of the development of the style known to many as "Pennsylvania Dutch." Plate 74 will reveal the emergence of the style, with its tulips and hearts. By the time we reach Plate 72 we have a rather crude and uninspired form, with the two hinges simply decorated with rounded ends and the hasp showing only the barest shadow of a bird form. Compare this with the hasp in Plate 68, with its well-worked-out design and typical motifs coupled with finely beveled edges, and the decline in the craftsmanship as time went on will become apparent.

Other parts of the wagon received special treatment as well as the toolbox. The axe holders were often very fine. Plate 79 illustrates a fish axe holder which is particularly well worked with a carefully considered design. Plate 77 shows another form of axe holder. This is the type more usually found. You will notice the punch-work decoration so typical of wagon irons long before the age of the Conestoga. It is another example of the traditional and its influence on the work of the smith.

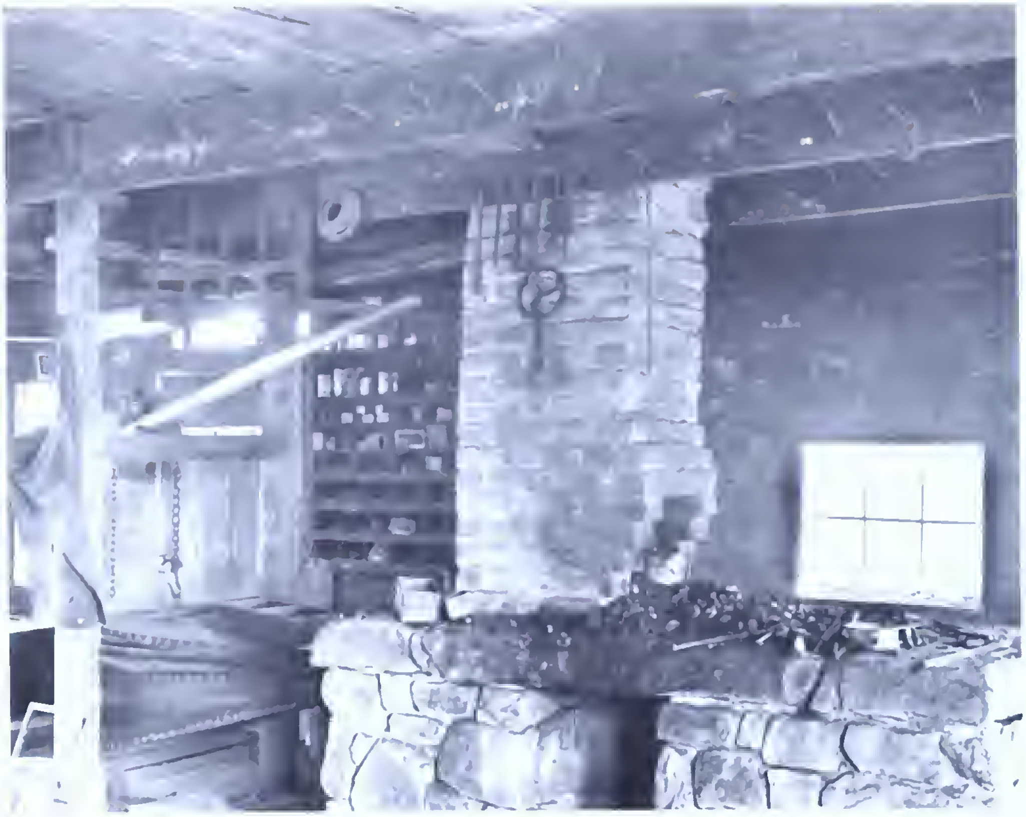
Another example of a desire to create beauty is the attention given to the forming of the chain stay in Plate 75. Special care was taken to form the even ascent of the spiral, and in the treatment of the snake's head.

Mill irons were the work of the country smith, unless the millwright was also talented at the forge. A curious iron is shown in Plate 93. It has been misidentified elsewhere as a lifter for a mill raceway gate. However, it was used to adjust the distance between the bedstone and the revolving runner millstones, thus controlling the fineness of the flour produced. The lower part was attached to the timber on which the runner pivoted, and the top was balanced on a fulcrum point with a lever, called a bottle beam, extending out at right angles to the section with the holes. A pin inserted in one of the holes determined the elevation of the stone.

In a final analysis the smith will be seen as a man of many talents, a mainstay of the community, especially in the eighteenth and early nineteenth centuries before a wide variety of commercial goods became available. His shop served naturally as a gathering place for men of his village and as a center for the exchange of information on crops, gossip, and national news. It was dimly lit in order that the smith might better see the condition of the iron he was working.

The eighteenth-century smith made a great variety of household and agricultural articles, but as the nineteenth century wore on, more and more of his working hours were given over to the shoeing of horses, once the specific task of the farrier. Rather than creating objects of traditional beauty and usefulness, he now spent time repairing worn-out implements, or making smaller items for the farm. To assess fully the worth and standing of the smith in the early communities of Pennsylvania, and elsewhere for that matter, one has only to examine the character of the items he made, and the way in which he met the problems connected with each. Virtually every article for home or farm that could not be formed of wood was the province of the smith. Look around your own home and try to imagine the smith making all the iron or steel items, both mechanical and non-mechanical, that you see. To say that the smith was an important member of the village would be an understatement. He was a necessity, whether the community was a city like Philadelphia, or a country town far on the western reaches of the State. Today he is known to us through his work.

JOHN D. TYLER, *Curator*
Science, Industry and Technology
William Penn Memorial Museum



Interior view of the Epley shop showing forge and bellows.

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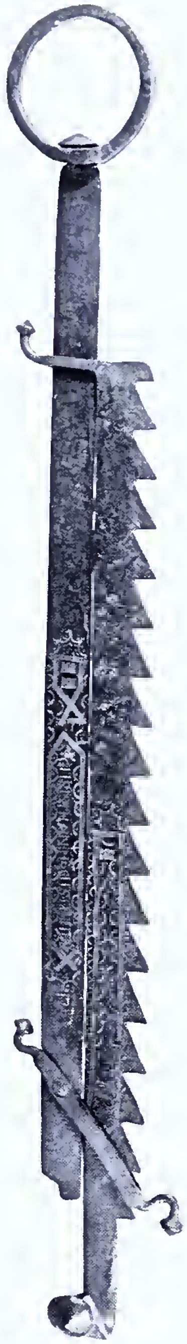
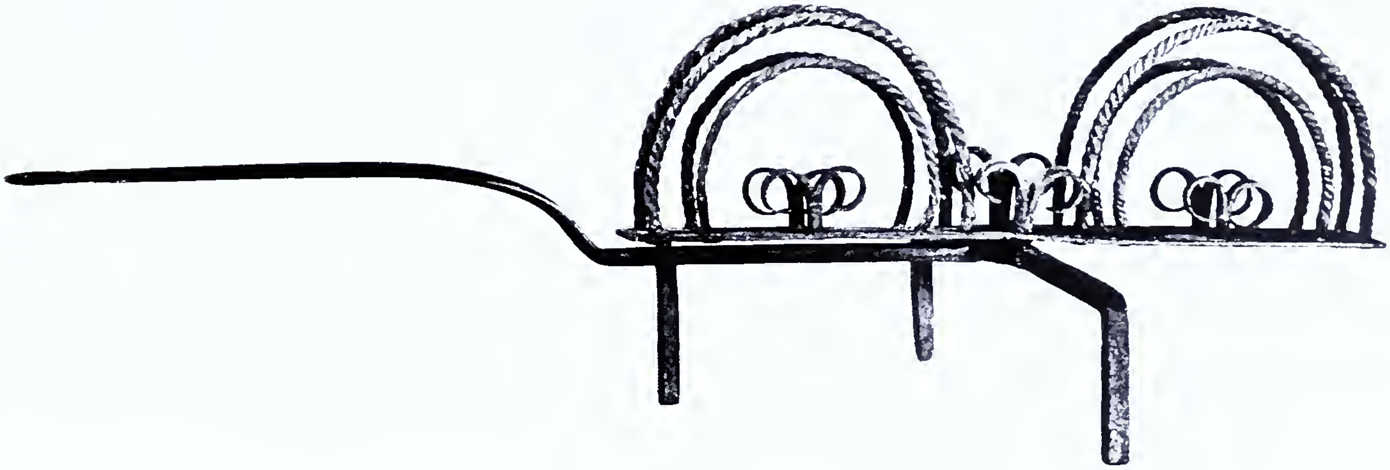


CATA LOGUE

Plate 1. Saw-Tooth Trammel; F 55.19.2
Used to suspend pots and kettles over a fire, this trammel was made to hang from a lug pole. A lug pole was a sapling, possibly oak or hickory, which was suspended up in the fireplace spanning the length of it. Our example displays exceptionally fine workmanship of elaborate stamped decoration and is inscribed "Christian Hochstetter 1751." The blacksmith's stamped "KM" also appears in three places. Length 42".

Plate 2. Bread Toaster; F 11.400
A toaster exhibiting fine twist and scroll work. Bread was placed between the twisted arches and set close to the hot coals in the hearth. When one side was toasted, it was a simple matter to rotate the rack and toast the other side. Late 18th or early 19th century. Length 16½".



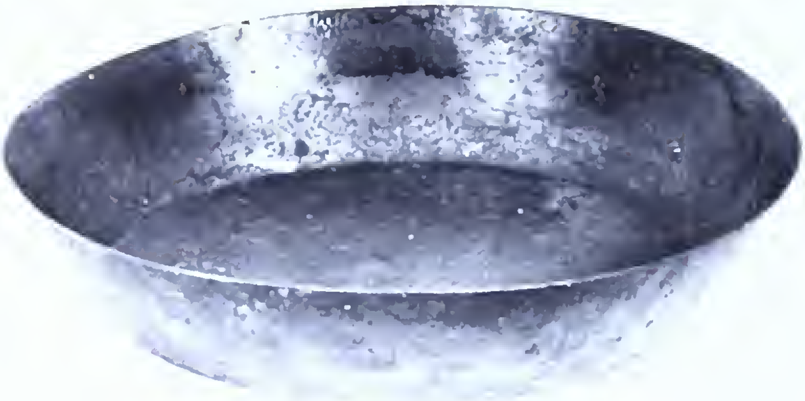


Plate 3. Baking Pan; F 24.367

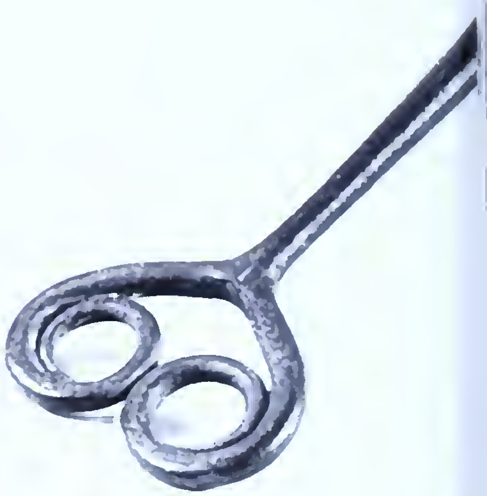
The baking pan was hammered over a form from a single piece of sheet iron. It could be used for a variety of baking purposes. 19th century.

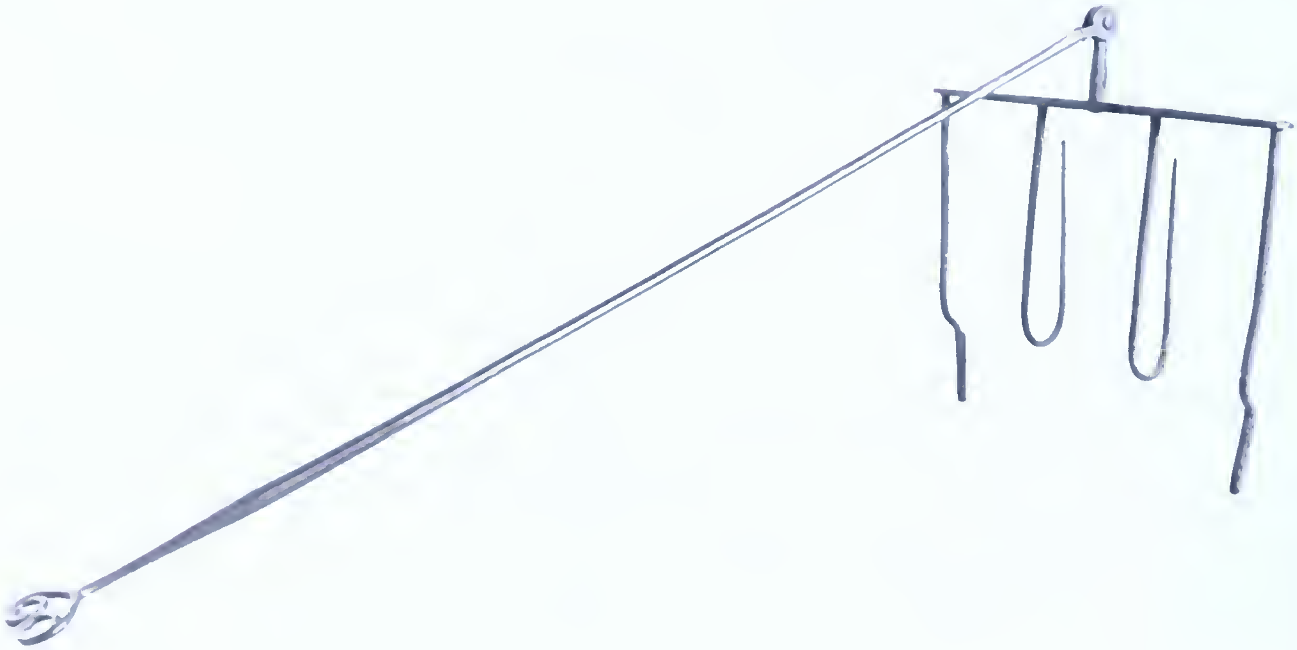
Diameter of rim 11⅝″.

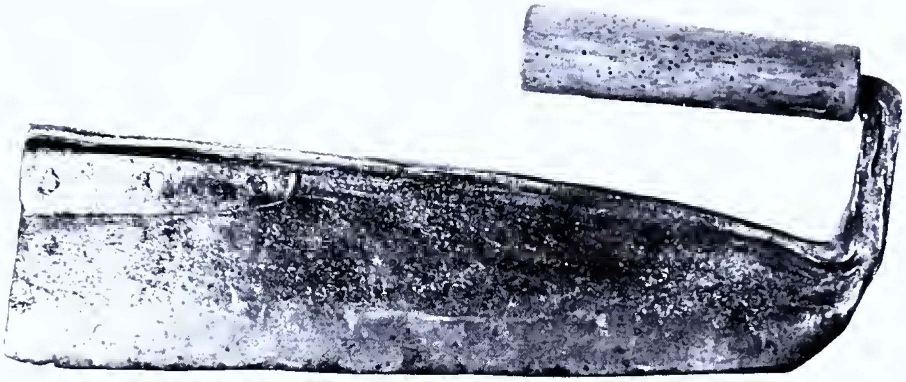
Plate 4. Toaster; F 24.341

Lindsay refers to this form of toaster as another type of "Down Hearth Bread Toaster." His illustrated example has a part wood and iron handle. Our example is missing its end prongs. The handle, terminating in a heart form, is especially noteworthy. 18th or early 19th century.

Length 29½″, width of toasting rack 12″.







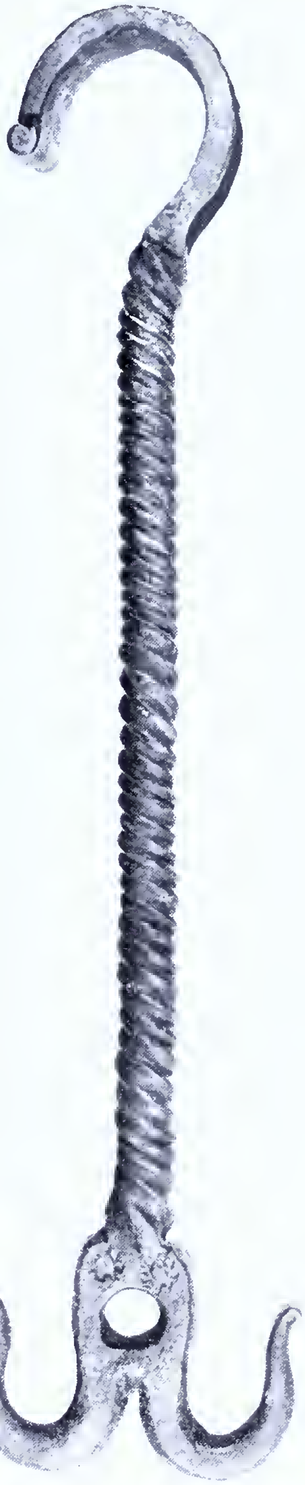
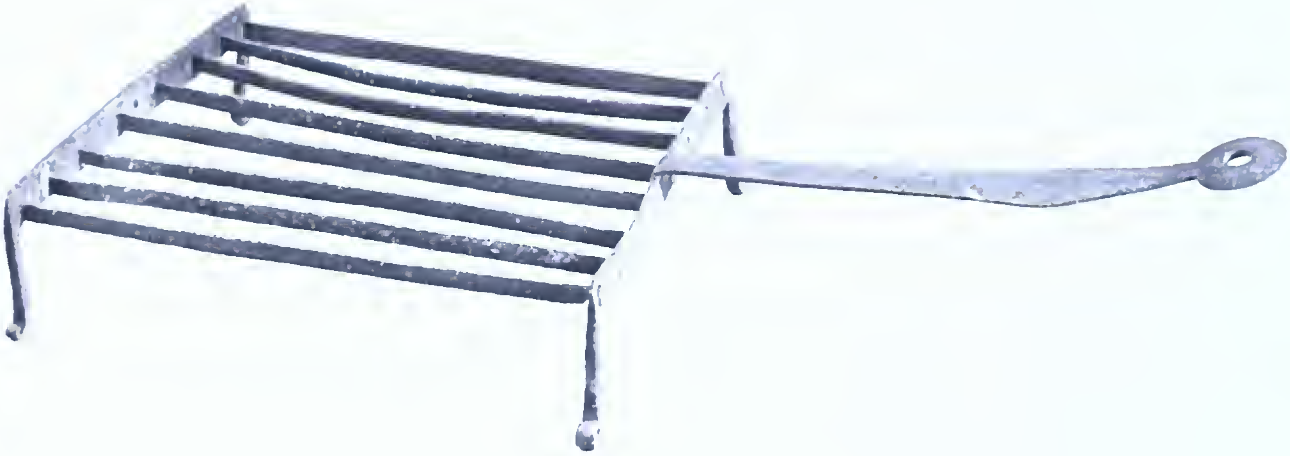


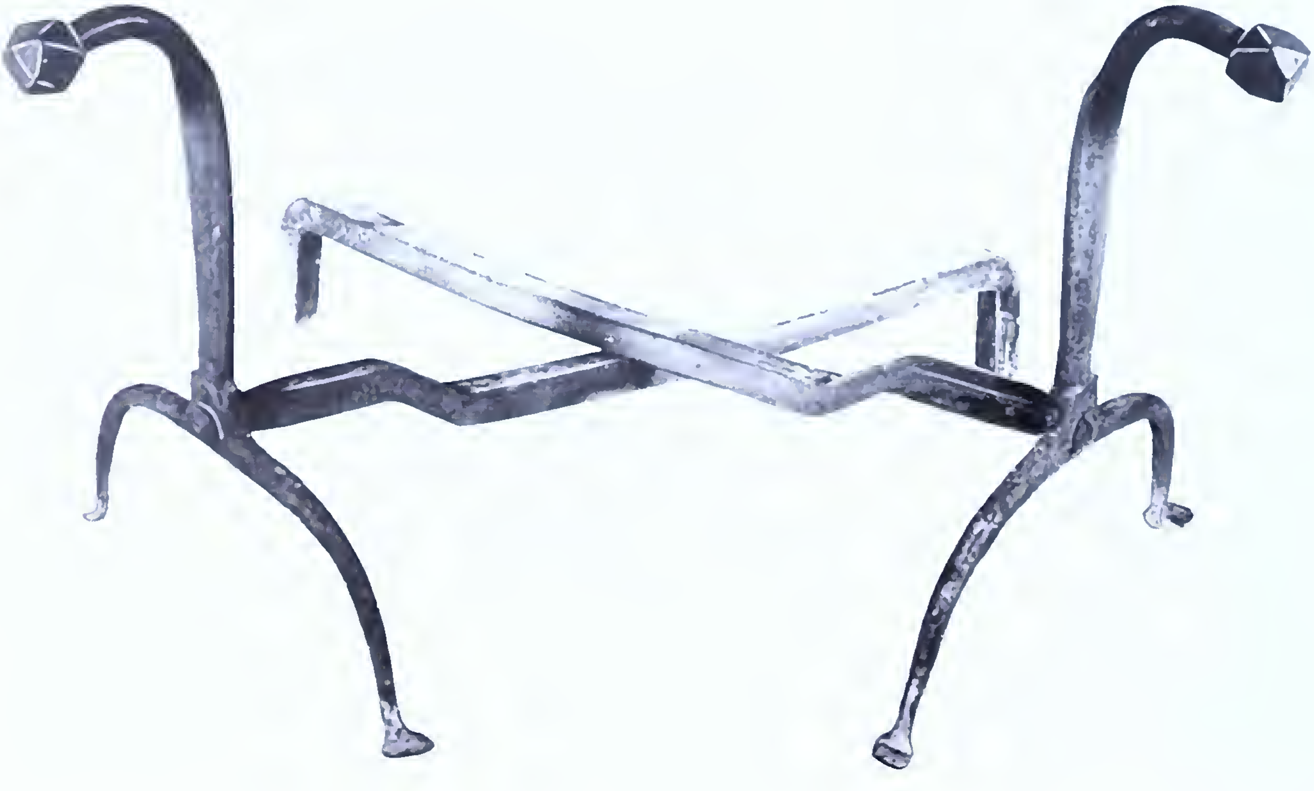
Plate 5. Meat Cleaver; F 0.770
This primitive example was made from a scythe blade, thus demonstrating the frugality of our ancestors. An additional iron piece is riveted under the flange to withstand the hammering necessary to cut through bone. Probably early 19th century.
Length 14⅛″.

Plate 6. Pot Hook; F 24.342
The pot hook was suspended from chains when in use over the hearth. The ornate quality and form make this artifact an unusual example of fireplace accoutrement. Probably 18th century.
Length 14″.

Plate 7. Gridiron; F 11.385
Meat was broiled upon the gridiron over a bed of hot coals. The flattened handle provided stability when lifting. Probably 18th century.
Length 26¼″.

Plate 8. Pair of Andirons; F 24.378 a & b
A basic pair of "gooseneck" andirons ending in a faceted head. Shafts and legs were made of a single piece of bar iron split halfway to form the legs. The legs were then rounded and flattened into pad feet. The replaced rear dogs attest to the deterioration of wrought iron when subjected to constant fire. Late 18th or early 19th century.
Height 13¼″.





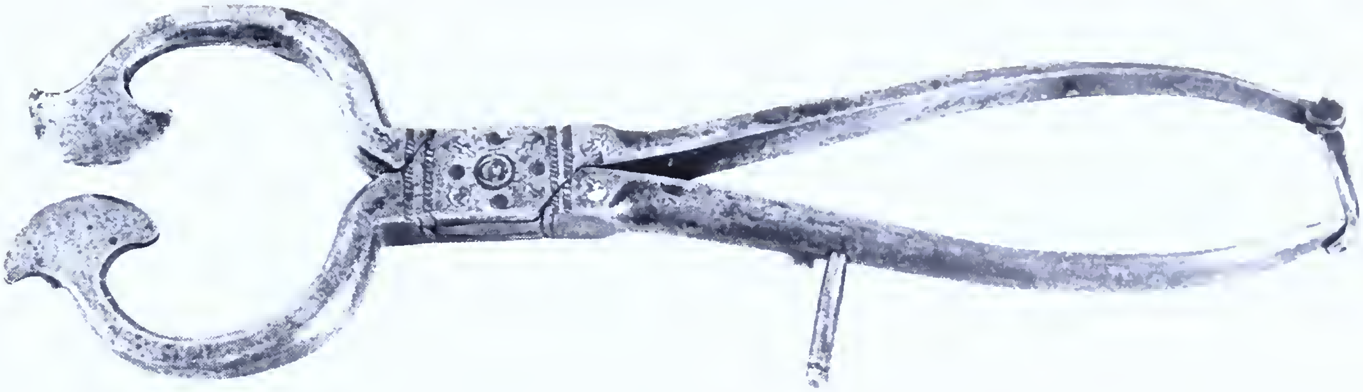
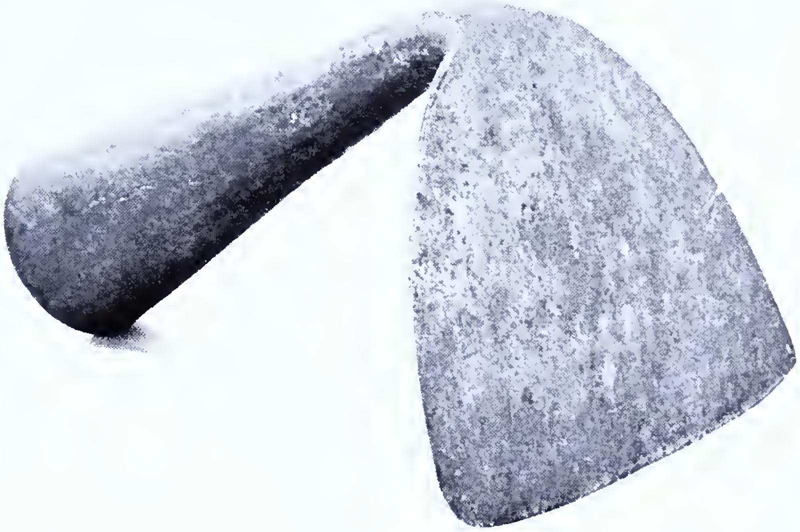
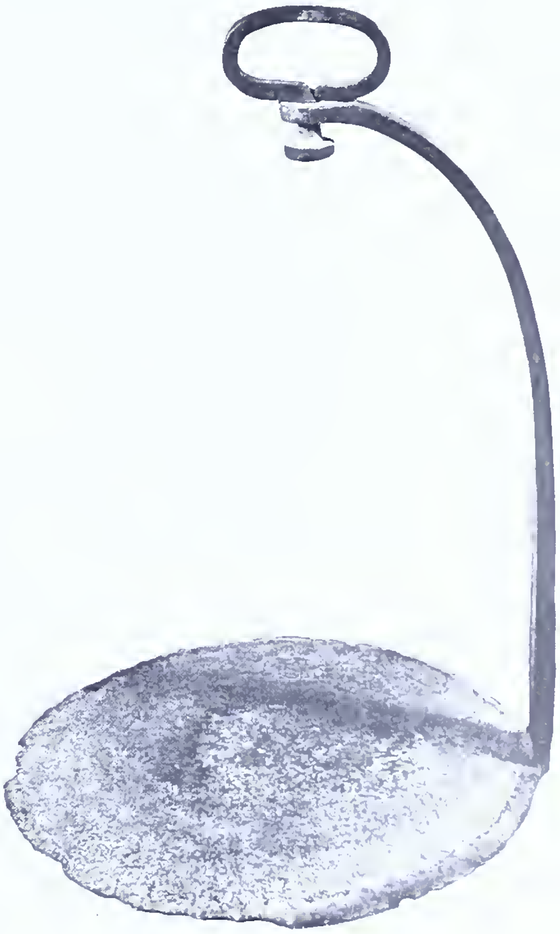


Plate 9. Sugar Cutter; F 70.7.3
Also referred to as sugar nippers, sugar cutters were employed to cut large lumps of sugar into suitable size for table use. The precise workmanship, as this piece displays, was often done by whitesmiths. The cutter is signed "B. Smith." Late 18th or early 19th century.
Length 10".

Plate 10. Dough Scraper; F 10.691
Although an ordinary form of dough scraper, this example is signed and dated "P D, 1844." P D are the initials of Peter Derr, a Berks County craftsman who made finished household articles. Length 3½".

Plate 11. Hanging Griddle; F 24.376
A useful hearth item for frying eggs or cooking pancakes. The hanging arm and swivel were replaced at a later date, which leads us to believe this utensil has seen many years of hard use. Possibly 18th-century origin.
12½" diameter of griddle surface.





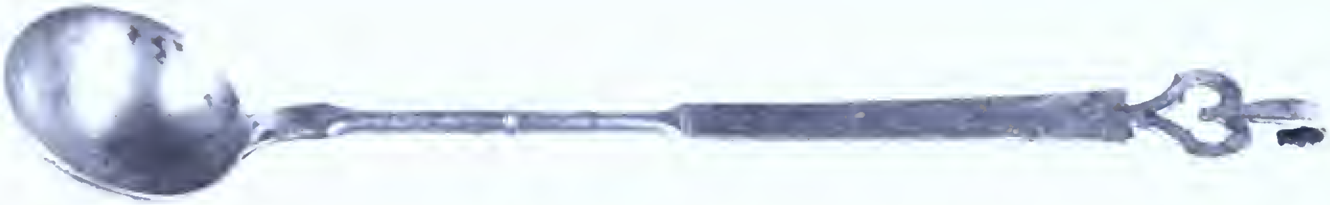


Plate 12. Ladle; F 14.397

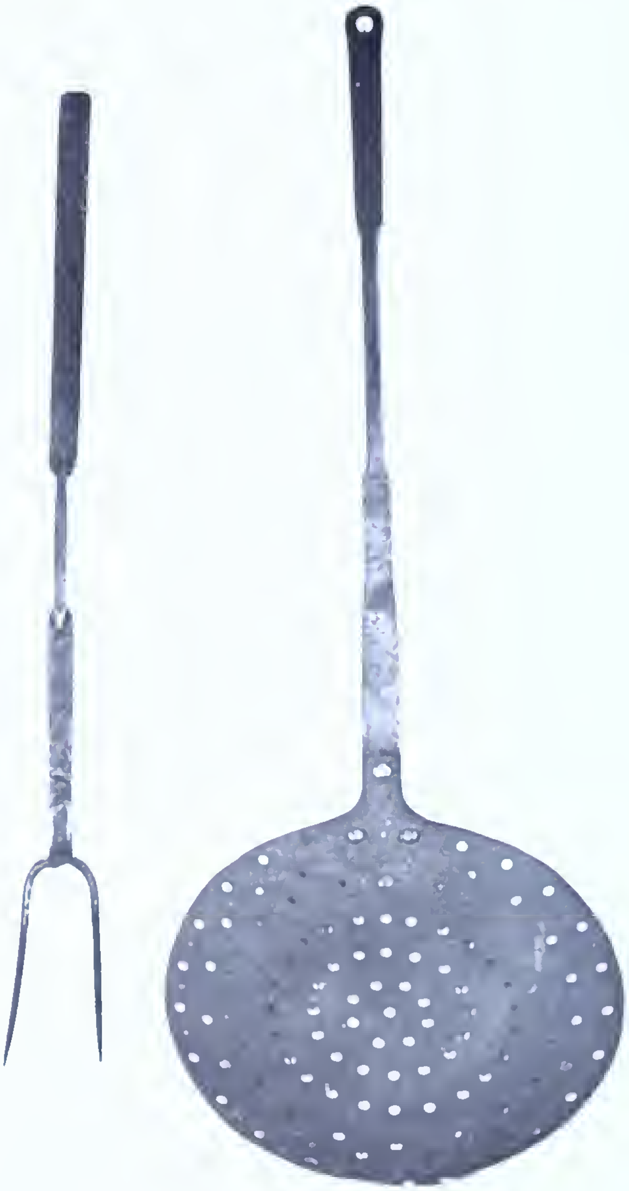
A whitesmith possibly was the maker of this well-designed kitchen utensil. It is made of steel, expertly filed and polished. Probably early 19th century.
Length 14¾"

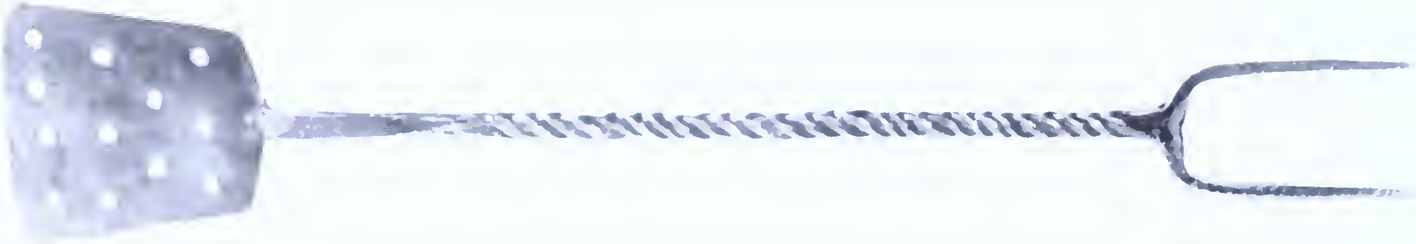
Plate 13. Butchering Utensils—Skimmer and Flesh Fork; F 0.721 and F 0.731

Both examples are large and lack ornamentation; they are purely utilitarian in form. The fork is marked "I. M. Ebersole" on the flattened portion of the handle. The skimmer pan is thin cast iron and is riveted to the wrought-iron handle. Probably mid-19th century.
Length of skimmer 35½"; length of flesh fork 30".

Plate 14. Flesh Fork and Pierced Spatula; F 14.396

The two-in-one combination makes this item unusual as a kitchen utensil. The pierced spatula allowed grease to drain off the meat as it was taken out of the skillet. Probably early 19th century.
Length 15½".





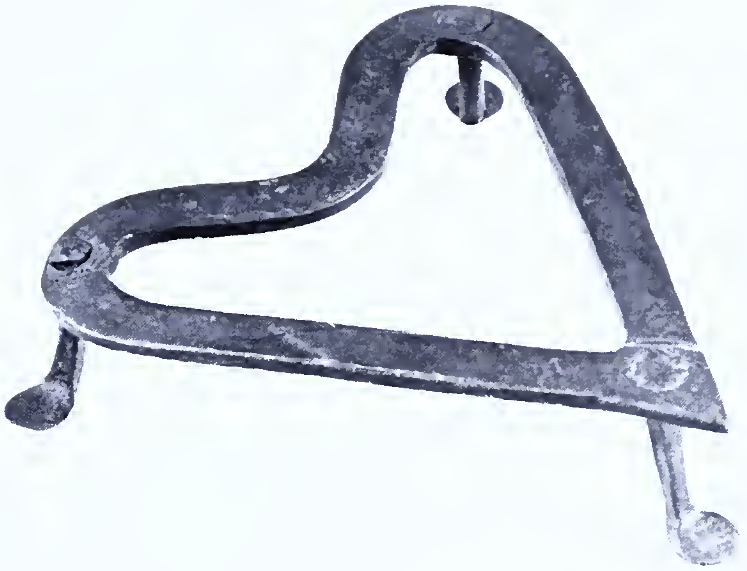


Plate 15. Trivet; F 10.621
An elementary form of heart trivet supported by splayed legs ending in pad feet. It was probably used to support a hot pan or dish on a table. Early 19th century.
Length 5¼″.

Plate 16. Apple Peeler; F 8.84
Before the introduction of the factory-made cast-iron apple peeler, the majority of peelers were made of wood. This wrought example is made entirely of iron and is therefore rather unusual. Clamps and wing nuts secure it to the table top; an apple is pushed onto the prongs and the blade is held against the apple which is turned by the crank handle. This example probably dates from the early 19th century.
Length 9″.

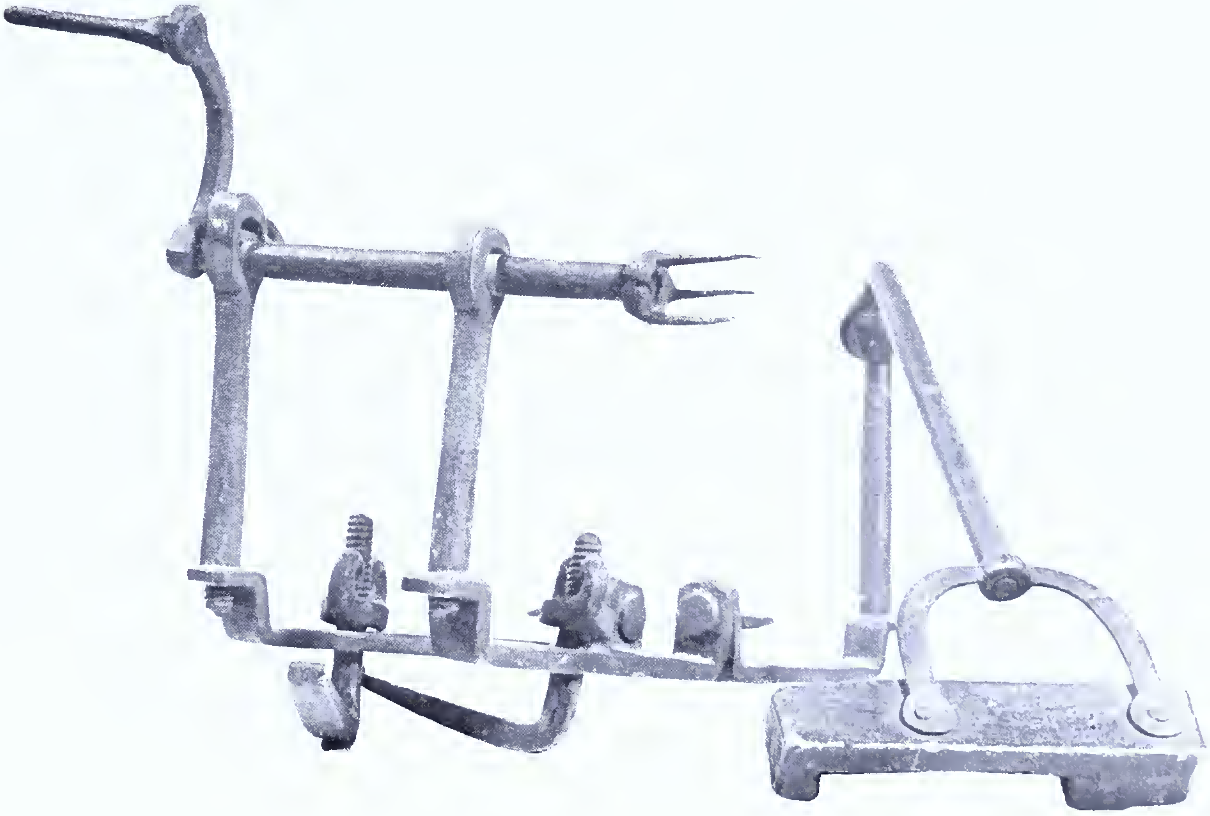


Plate 17. Seam Cutter; F 22.315

A seam cutter exhibiting delicate file work. Late 18th or early 19th century.
Length 3¾".

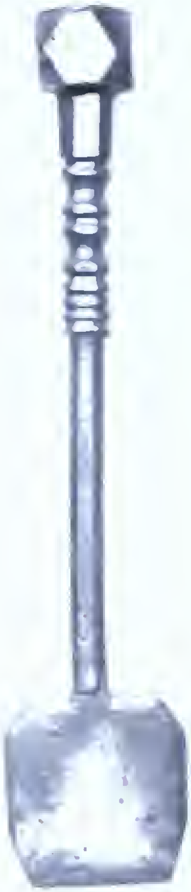


Plate 18. Quilting Frame Clamp; Anonymous Loan; Sewing Clamp; F 12.952

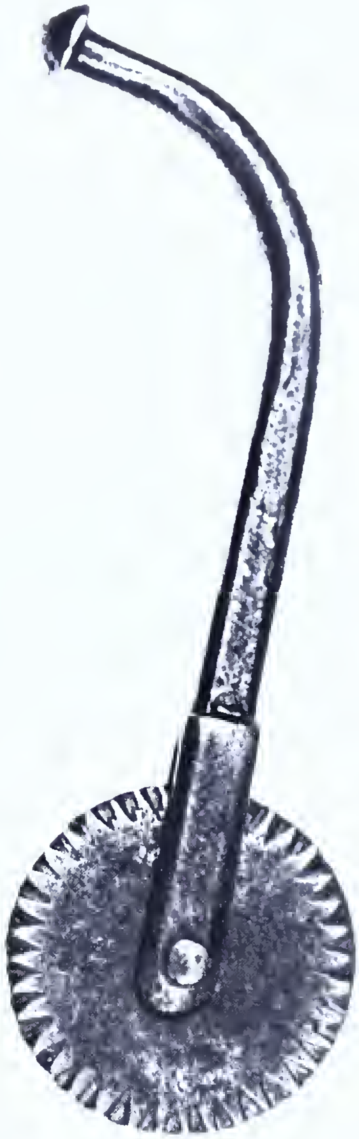
A series of quilting frame clamps provided the necessary tension of the material stretched on the frame. 19th century. The sewing clamp secured to a table edge provided an anchor point, for instance when hemming dress material. This example is dated "1852" and has the initials "A H" on the wing nut.
Length of quilting frame clamp 1¾"; length of sewing clamp 5½".

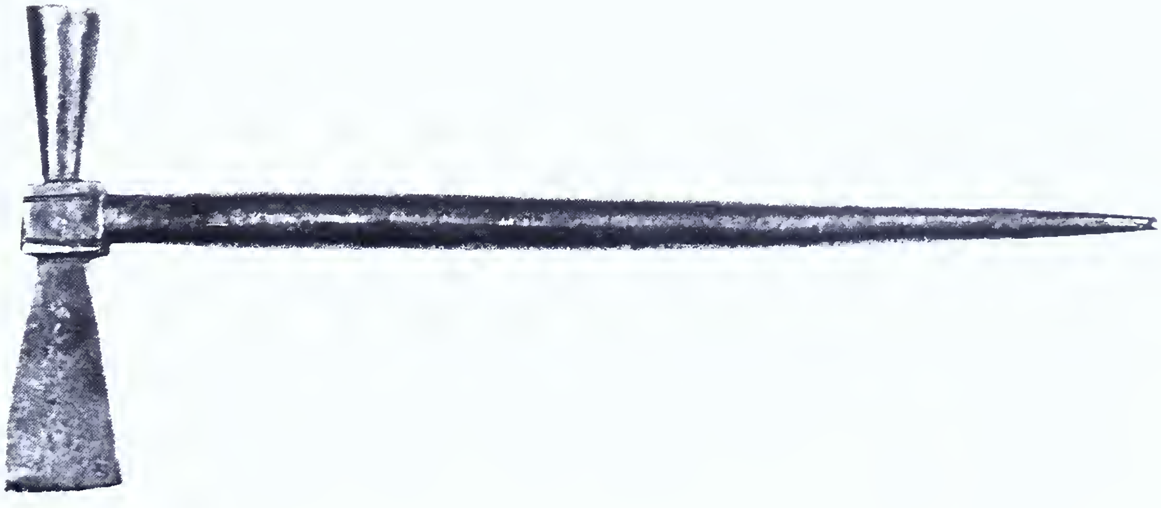
Plate 19. Pie Crimper; F 22.925

A pie crimper was used to trim excess dough from around the edge of the pie while it also sealed the top and bottom crusts. This fine example was probably made by a whitesmith in the 19th century.
Length 5¼".

Plate 20. Seam Cutter; F 22.314

This dainty tool is a refined product of a whitesmith. Seam Cutters were common seamstress tools of the 18th and 19th centuries. Its sharp blade was used to quickly open seams; it has also been suggested that this tool was used to make button holes. This example probably dates from the first half of the 19th century.
Length 5¾".





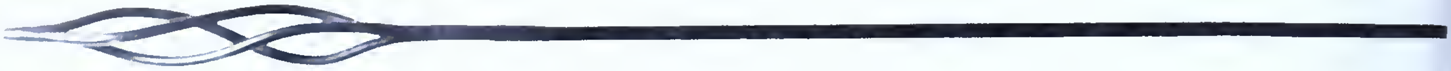


Plate 21. Stove Poker; F 24.375
Here is a prime example of a basic tool beautifully designed and extremely practical. The handle has an ethereal quality; however, the twisted form was designed to fit perfectly in the hand. 19th century.
Length 27½".

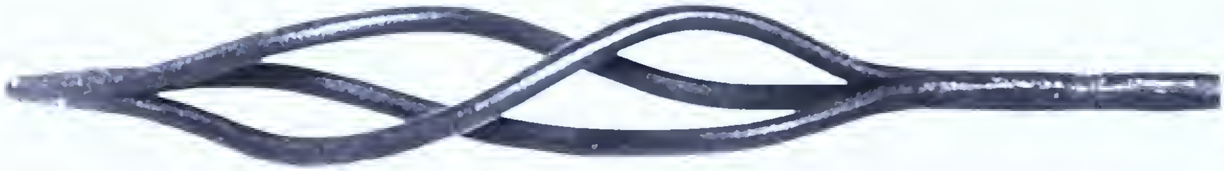


Plate 22. Flax Hetchels; F 24.185 and F 24.186
Used in the processing of flax fibers for the eventual spinning into linen thread, the hetchel served to straighten and grade the fibers according to fineness. Respectively, they are dated "1806" and "1801."
Length 13" and 12¼" respectively.

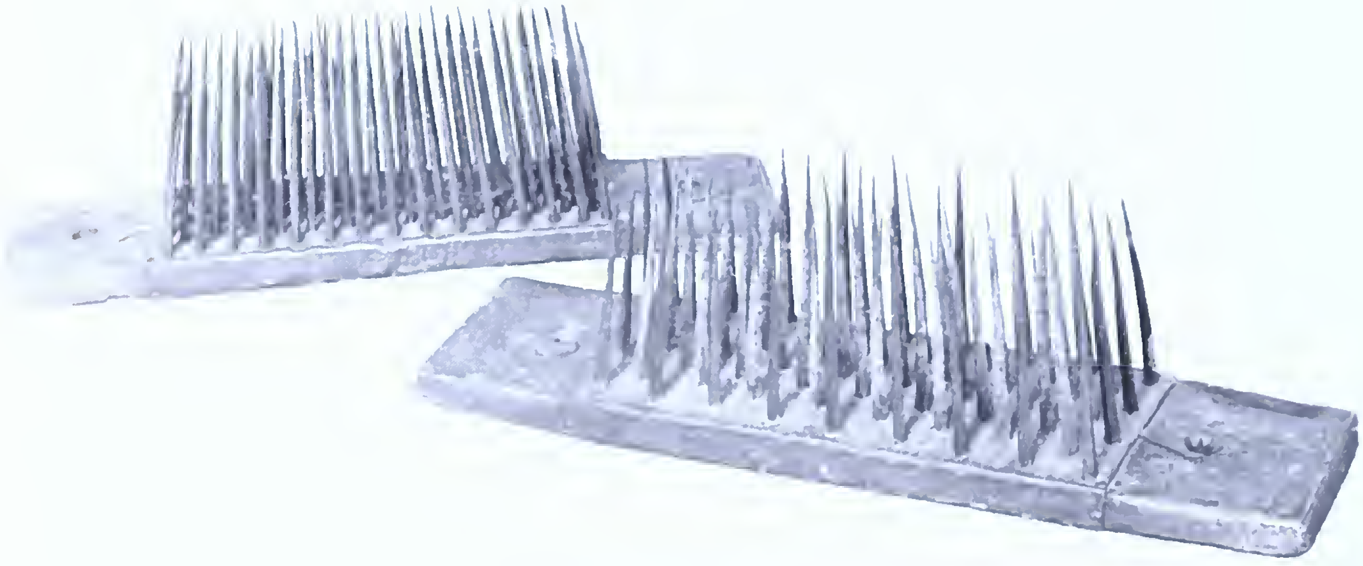
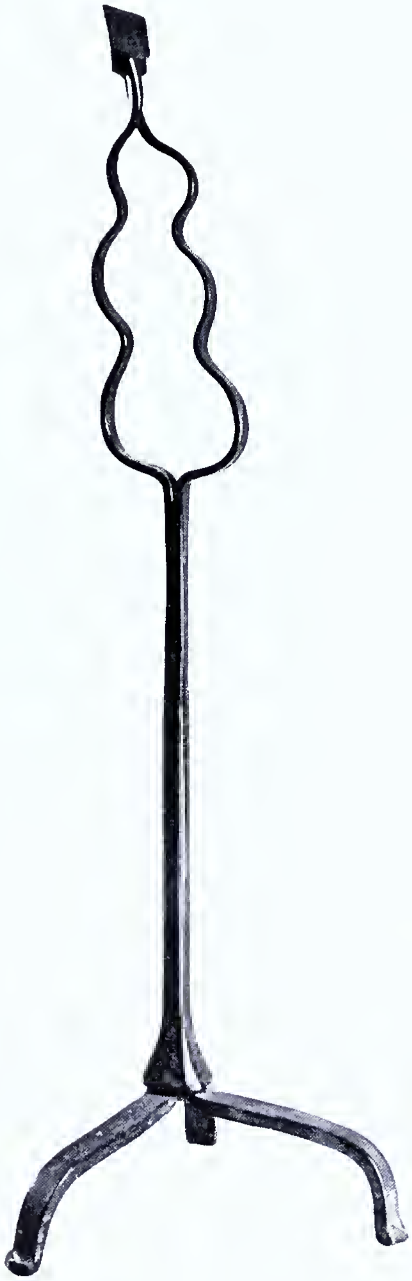


Plate 23. Rush or Splint Holder; F 11.25

Used to hold a thin wooden splint or fat-soaked rush pith for illumination. A lighting device of this nature required constant attention and afforded very poor light. The form and shape of the shaft, base, and legs would suggest it is of 16th- or 17th-century origin and English or Continental.
Height 26¾″.

Plate 24. Candle and Rush Light Holder; F 11.408

This example reveals good basic design and workmanship—simple and to the point. The flattened piece of spring metal opposite the candle socket holds the burning rush in place. 18th century.
Height 19″.



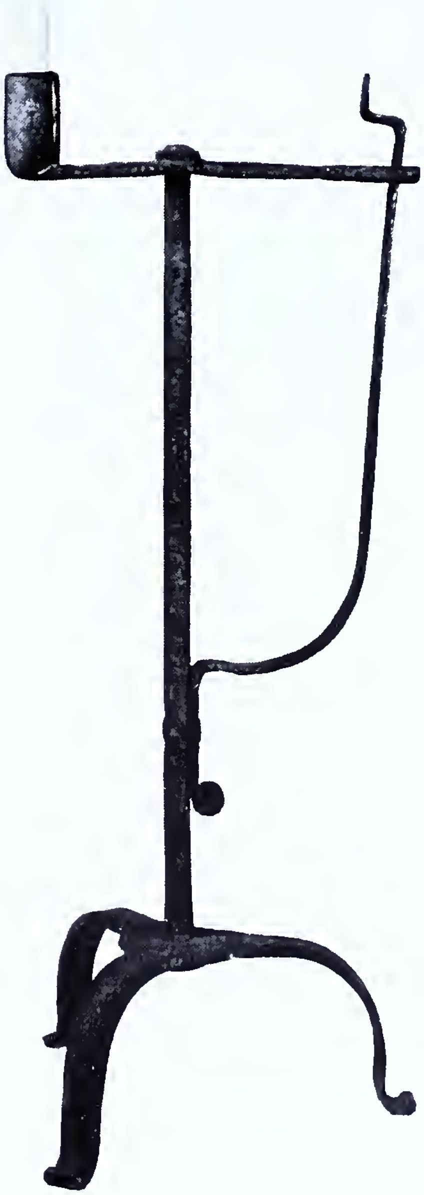
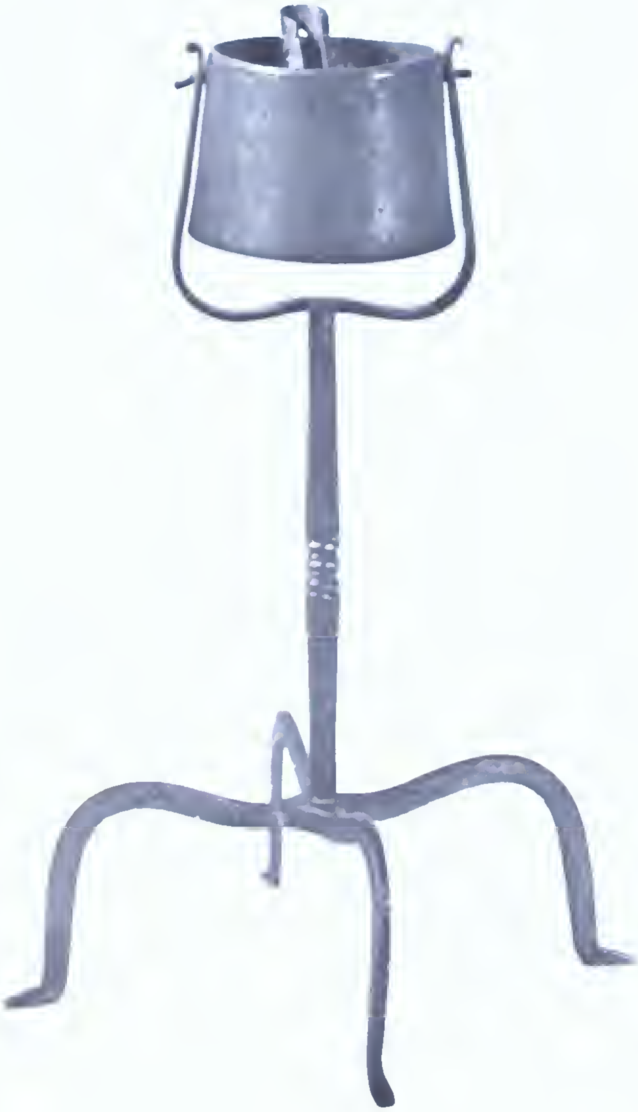


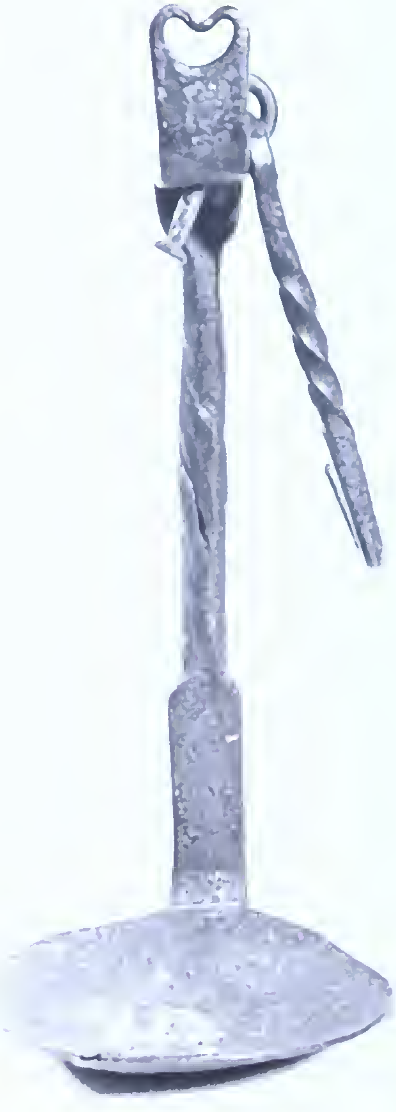
Plate 25. Swivel Grease Lamp; F 11.67

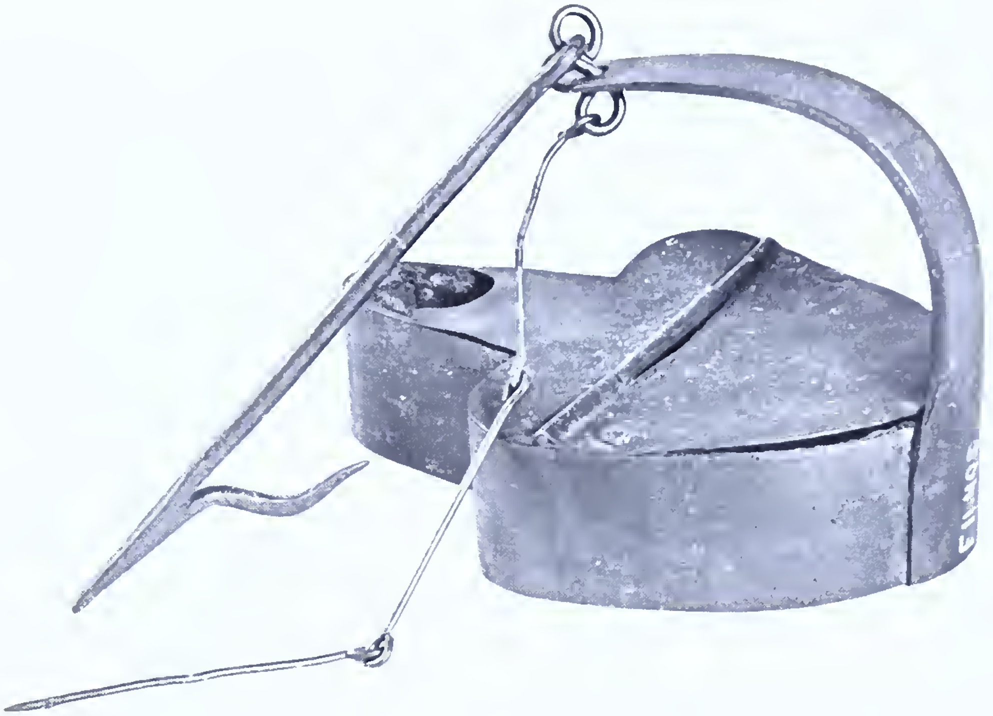
The sides and bottom of the sheet-iron font are brazed together in a unit. It is mounted on a wrought-iron stand. This lamp form is common to Pennsylvania and even though this example is well made, it lacks the details of refinement which appear so frequently on many examples. Mid 19th century.
Height 10".

Plate 26. Open Saucer Fat Lamp; F 16.897

The shallow saucer contained grease in which one or more wicks were soaked and burned. Frequently the grease dripped over the edge of the saucer since no wick tube was provided. This example is crudely wrought, and although the form is different, the intended concept as a fat-burning lamp relates it directly to the Betty lamp. Probably 18th century.
Height 7¼".







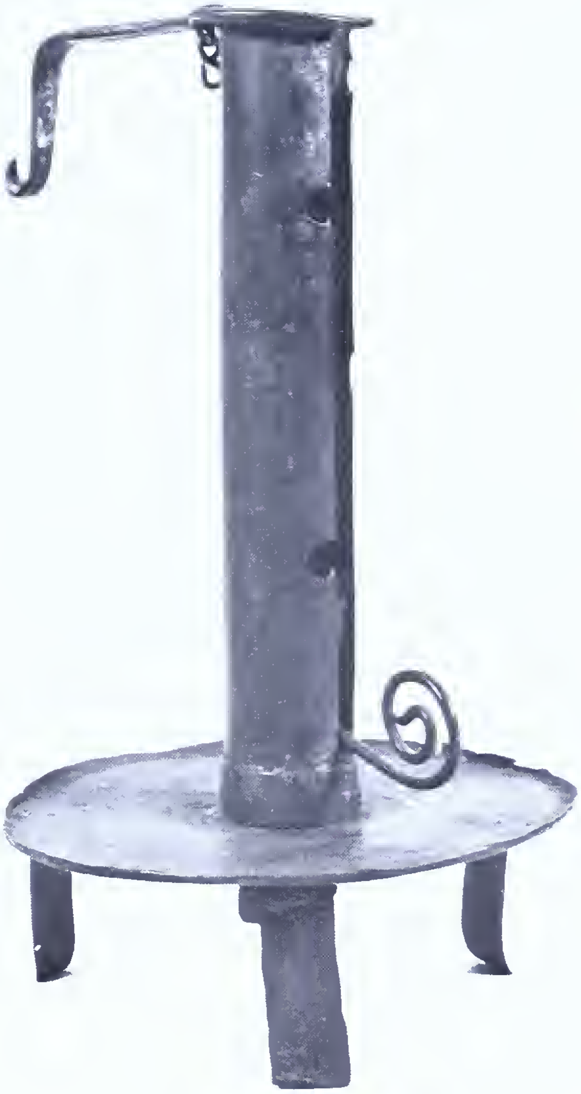


Plate 27. Sheet-Iron Betty Lamp;
F 11.405

As a lighting device, the fat-lamp form is ageless. The supporting wick tube and hinged cover identifies this type of fat-burning lamp as a Betty lamp. The wire pick was used at frequent intervals to adjust the wick, perhaps a twist of tow or cotton cloth, for proper illumination. Second quarter, 19th century.
Length 5¼″.

Plate 28. Sheet-Iron Candlestick;
F 11.390

The feet of this candlestick originally ended in a scroll and over the years the scrolls have been broken off. The notching in the shaft provides for adjusting the height of the candle, and the extension at the top is convenient as a carrying handle. Probably late 18th century.
Height 8″.

Plate 29. Suffolk Thumb Latch; F 23.65

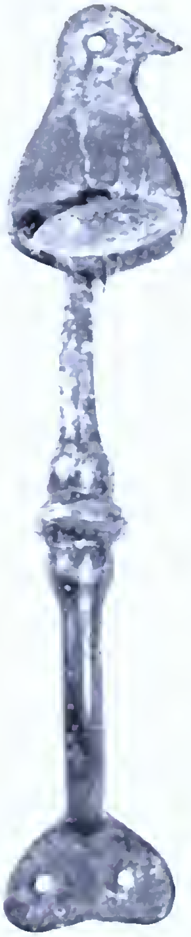
An amusing bird form latch, retaining traces of yellow paint. Thumb latches were generally secured to doors with nails driven through and clinched over. 18th century.
Length 10".

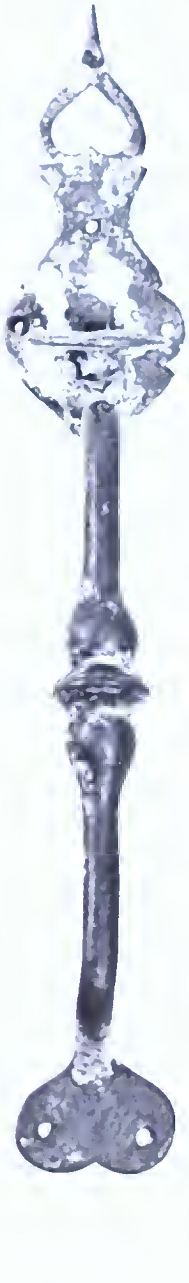
Plate 30. Suffolk Thumb Latch; F 23.58

A beautifully formed latch, its overall lightness indicates use on an interior door. This example retains traces of early blue paint. 18th century.
Length 12¾".

Plate 31. Escutcheon Plates; F 21.368 and Anonymous Loan

Although quite decorative attached to the exterior surface of a door, the practical function of both these plates was to provide a bearing surface for the handle of a box lock. Both examples date ca. 1800.
Length 4 11/16" and 4 ½" respectively.





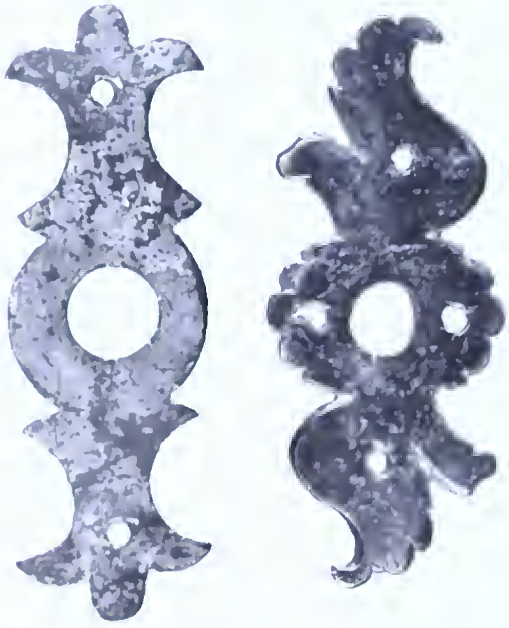
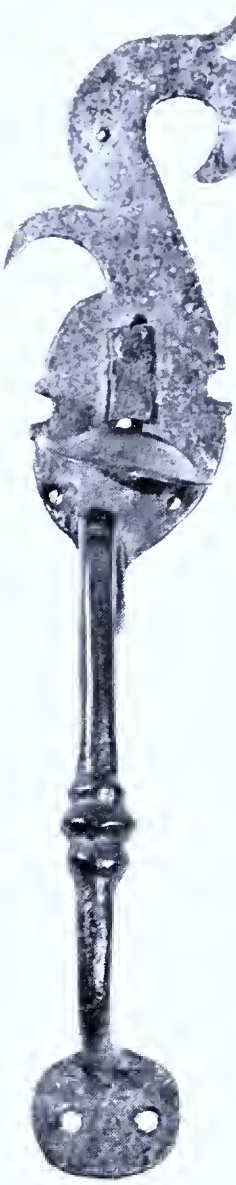
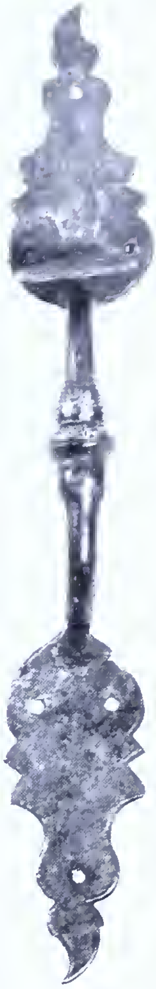


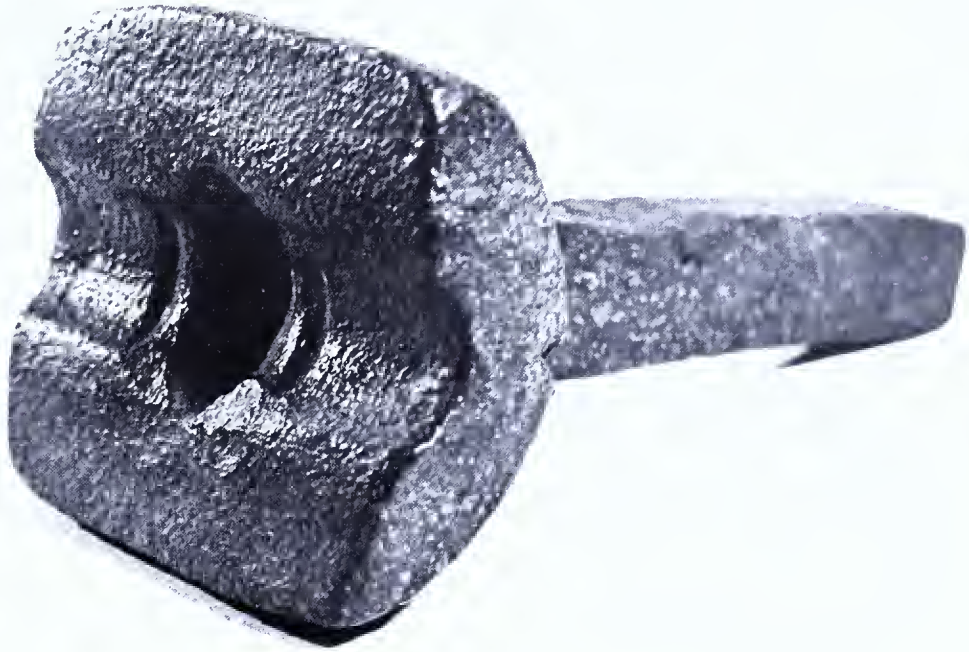
Plate 32. Suffolk Thumb Latch; F 23.63
This is probably the finest latch in the museum's collection. It retains much of its old green paint and was probably used on an exterior door. The generous-size knuckle was formed with a swedge block similar to the example in Plate 34. Early 18th century.
Length 15½″.

Plate 33. Suffolk Thumb Latch; F 23.39
Aside from the exceptionally fine scrollwork, which was accomplished with a chisel and file, attention is called to the knuckle portion of the handle. These varying bulbous and ring combinations were formed with the use of swedge blocks. 18th century.
Length 13″.

Plate 34. Swedge Block; F 16.981
Although a cast piece of iron probably made in a foundry, we have included it here because of its specific use by the blacksmith in forming a decorative knuckle on a door latch as in Plates 32 and 33. Probably made in the 18th century.
Height 5″.







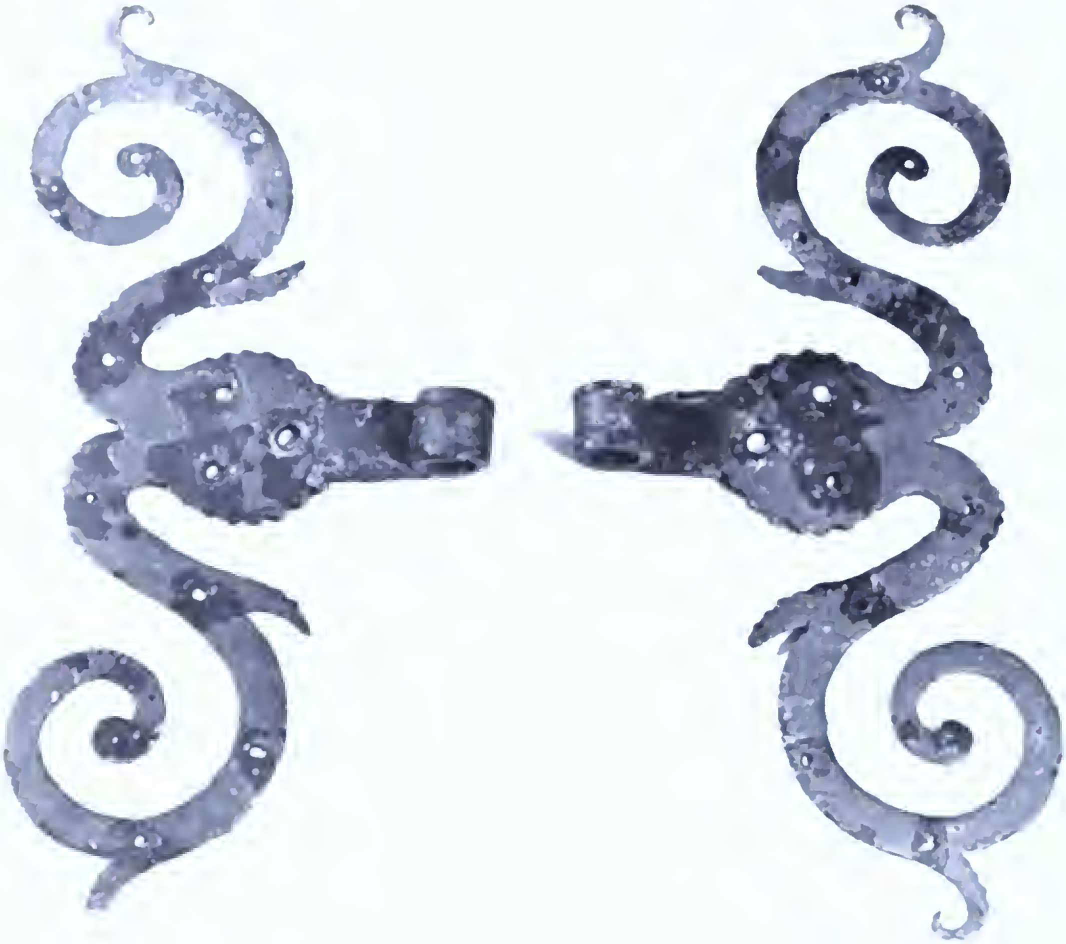
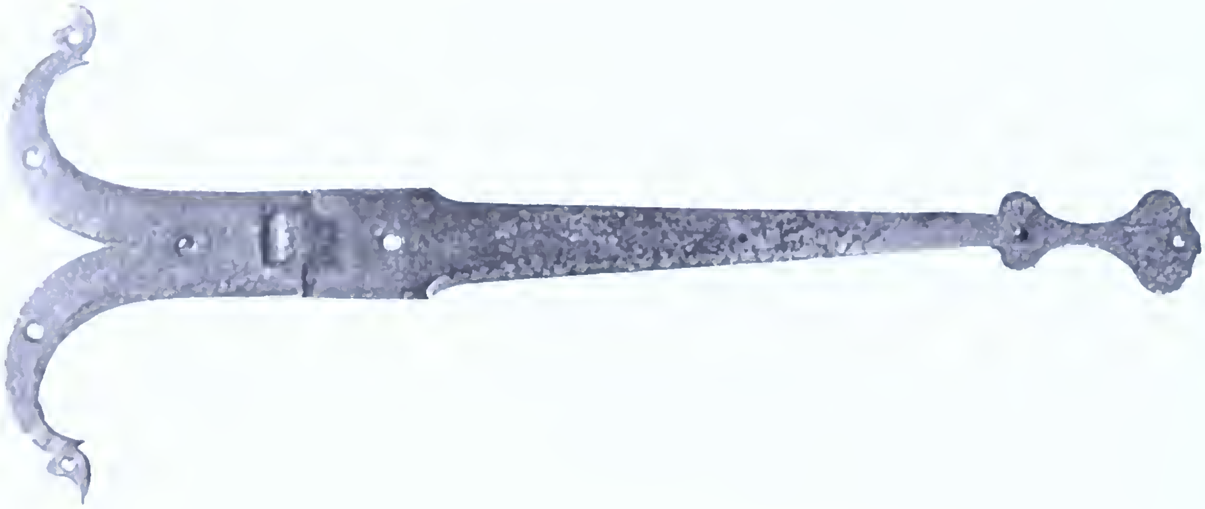


Plate 35. Pair of Ram's-Horn Hinges; F 23.373 a & b

This pair of hinges still retains much of its original brown paint. Hardware was commonly painted the same color as the woodwork during the 18th and 19th centuries. This pair, small in size, was probably used on an interior door. 18th century.
Length 11¼".

Plate 36. Strap Hinge; F 23.366

Essentially a light hinge, this example was probably used on an interior door or cupboard. The highly refined workmanship is quite evident in the illustration. Probably 18th century.
Length 17½".



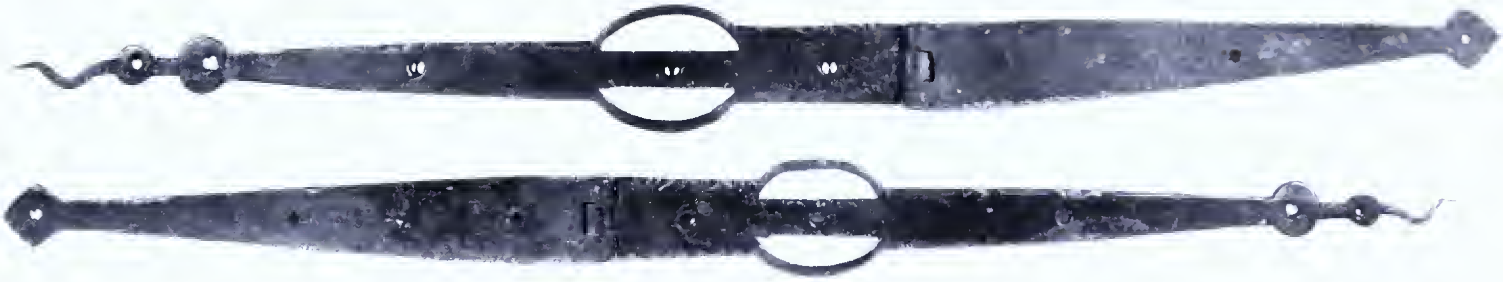
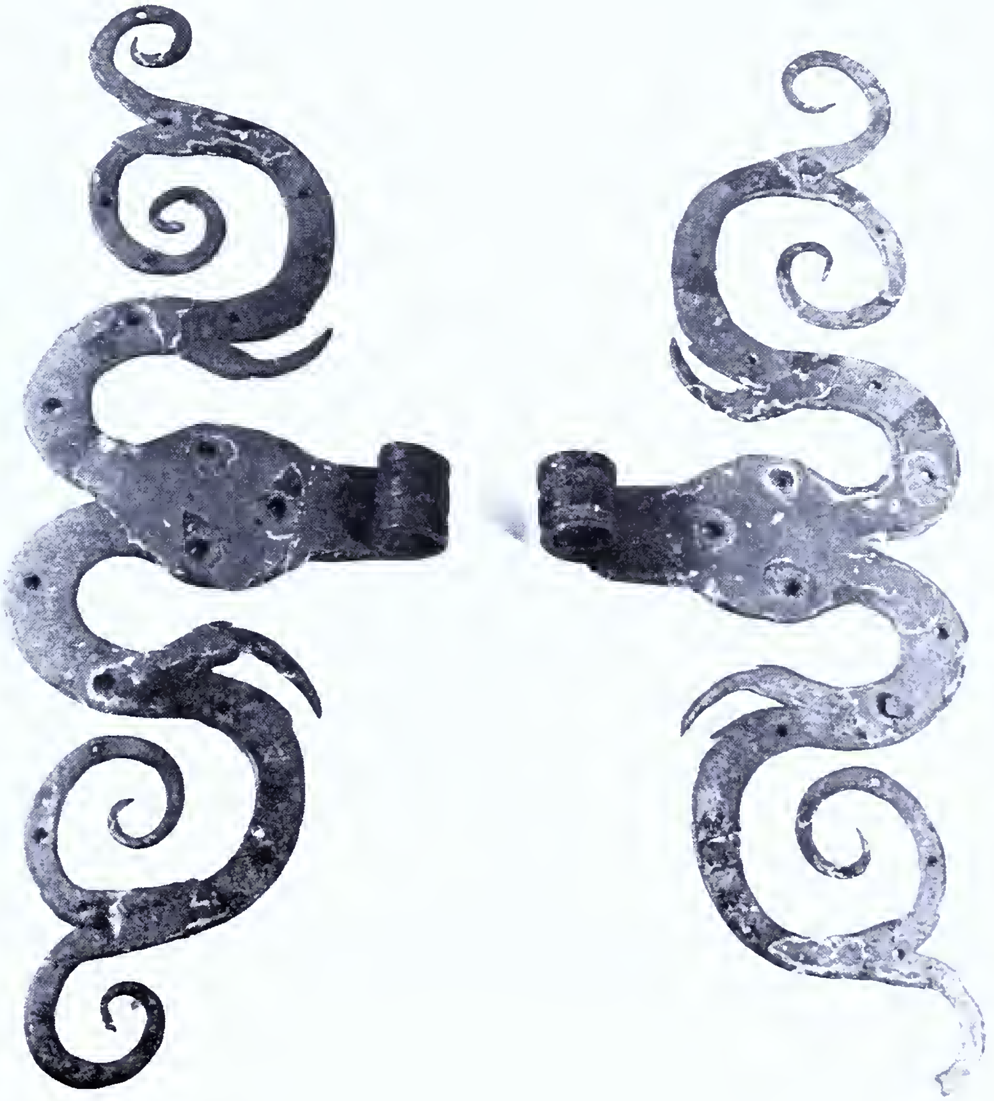


Plate 37. Pair of Dower Chest Hinges; F 23.367 a & b

The hinges reveal extremely fine workmanship Particularly noteworthy is the slitted open work and deep-cut filing on the edges. 18th or early 19th century.
Length 29".

Plate 38. Pair of Ram's-Horn Hinges; F 23.375 a & b

Modern-day phraseology as "ram's-horn," "stag-horn," "buckhorn," etc. is self explanatory. Depending upon size, these pintle-supported hinges may have been used on either interior or exterior doors. 18th century.
Length 19¼".



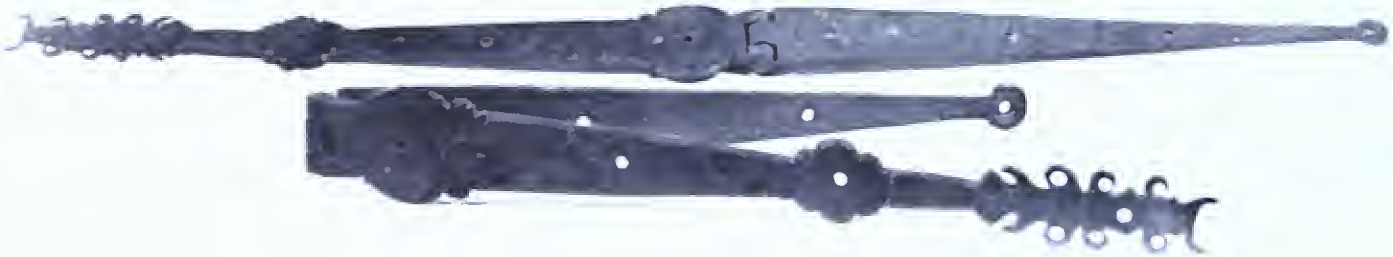
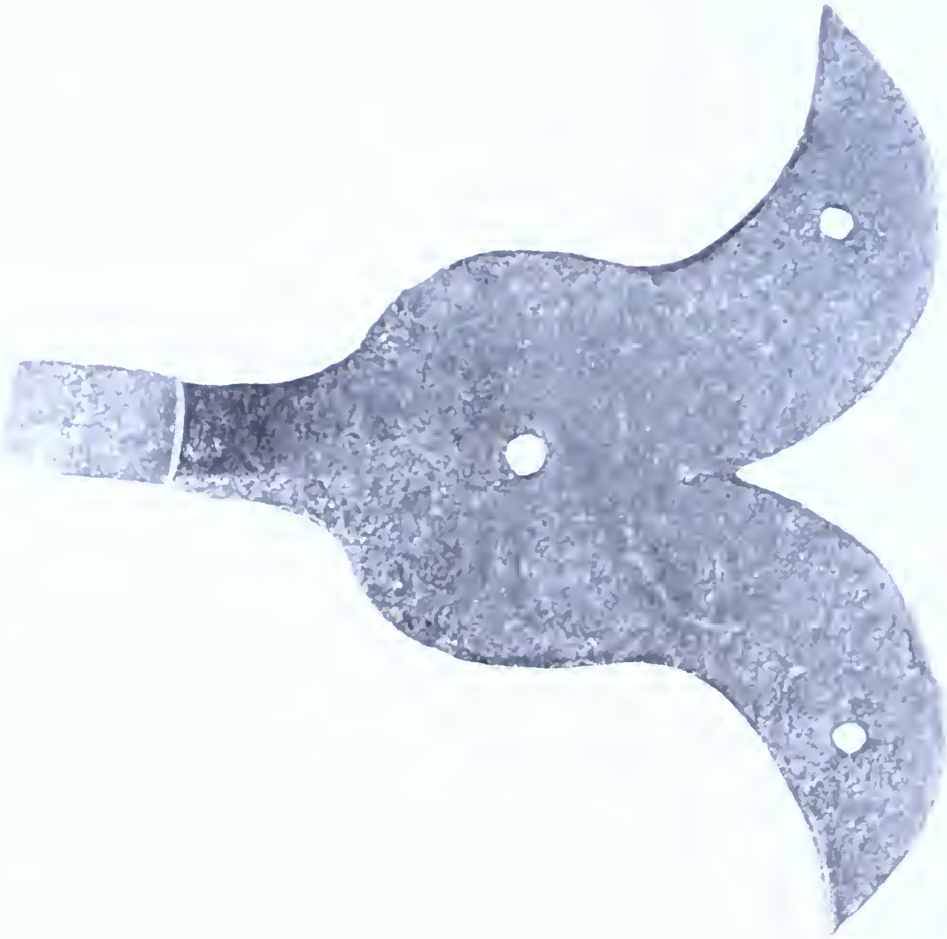


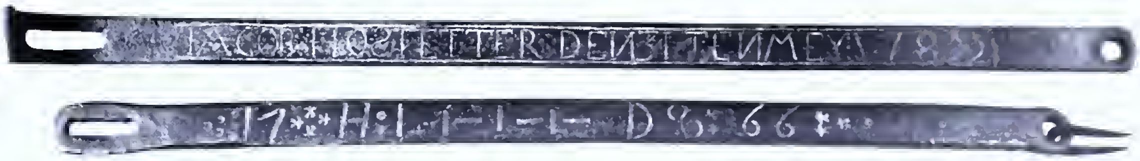
Plate 39. Pair of Dower Chest Hinges; F 23.370 a & b

The overall design quality reflected by these hinges indicates an early 18th century origin. Even though we believe the pair to be of American origin, stylistically they could have been made in England or Central Europe. The file work along the edges is especially beautifully executed.
Overall length 31".

Plate 40. Door Hinge; F 23.378

Probably from an interior door, the tulip form is obvious. However, the widely spread petals also resemble birds' heads. 18th century.
Length 5½".





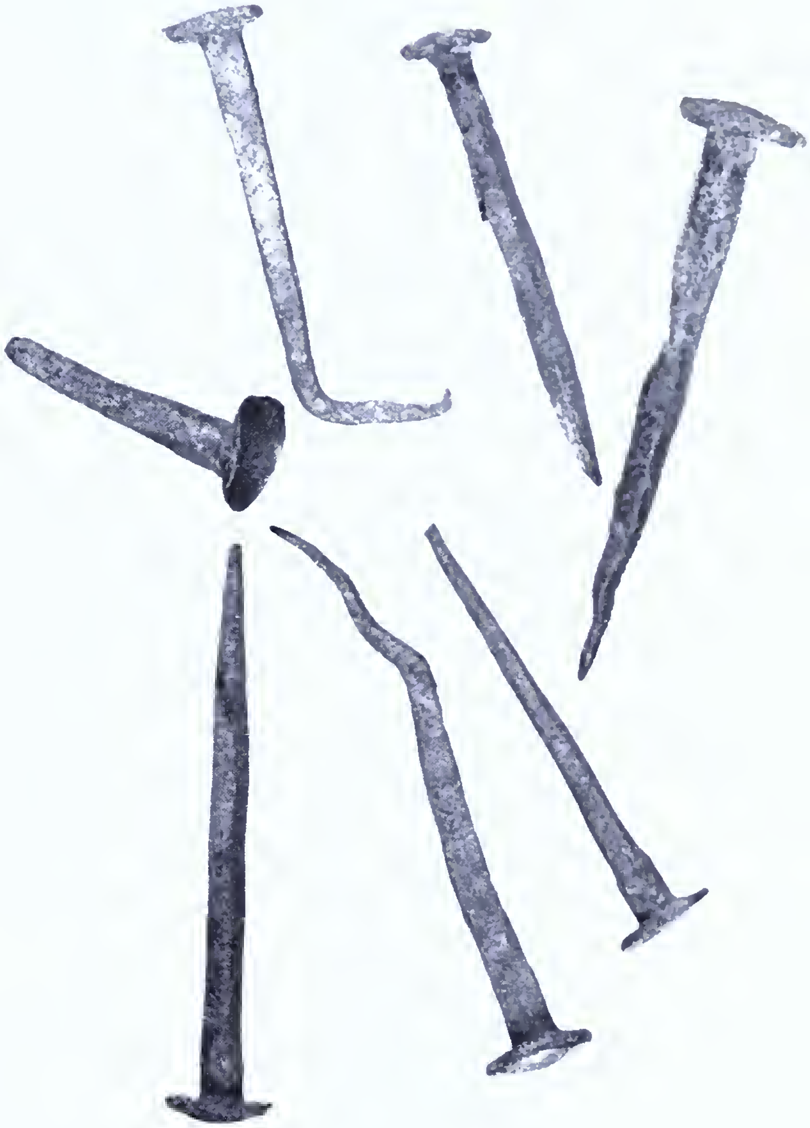


Plate 41. Stable Door Hasps; F 9.718 and F 24.398

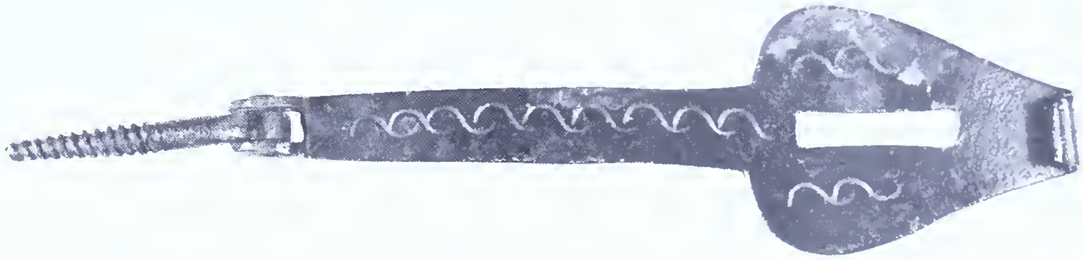
Traditionally on the Pennsylvania German farm the horse stable door was often provided with a hasp and lock, whereas the cow stable was not. The top hasp has the name "Jacob Hostetter" and "1785" across the front. "1766," initials, and stamped designs are across the lower example.
Length 46" and 43¼" respectively.

Plate 42. Grouping of Wrought Nails; uncataloged.

Nails were made by the blacksmith in many shapes and sizes for particular purposes. The longitudinal grain of the wrought iron enabled these nails to be bent or clinched over without cracking. Nails of this type were used to fasten hardware to doors, shutters, dower chest lids, and for other general purposes in the 18th and 19th centuries.
Lengths vary from 2¼" to 3¼".

Plate 43. Box or Trunk Hasp; F 23.379

The stamped decoration and hand-threaded screw are particularly well done. First half of the 19th century.
Length 7¼".



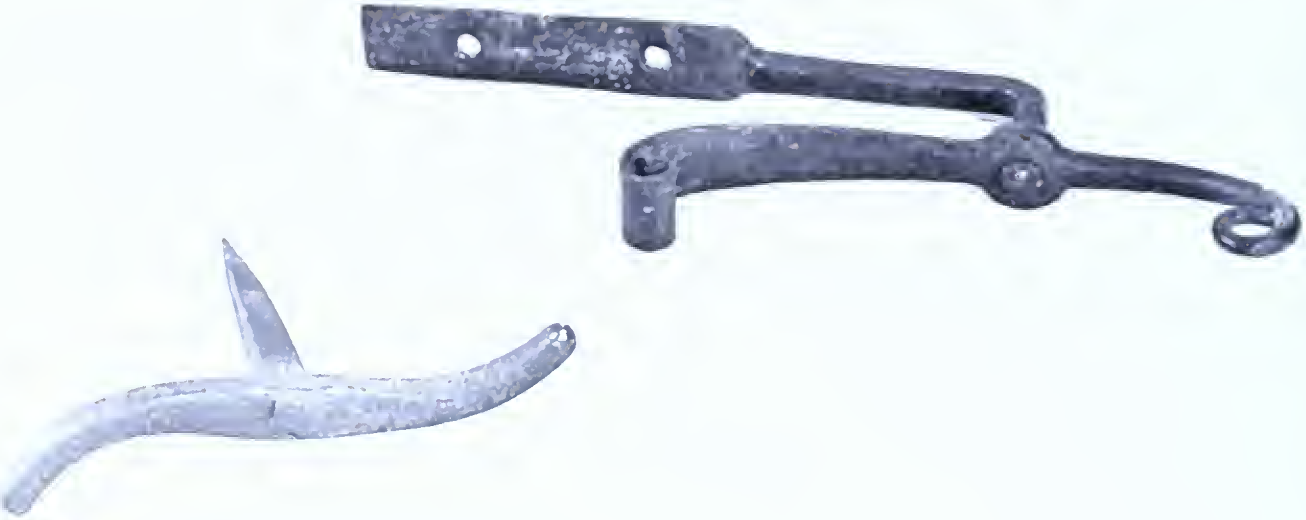


Plate 14. Shutter Fasteners; F 21.340 and F 21.338

The lower left-hand example does not swivel and may have been intended for use on a small attic window. Its spike was driven into the window sill, whereas the upper example was secured or nailed to the sill. Both examples are probably early 19th century.
5½" and 6¾" length respectively.

Plate 15. Pair of Rat Tail Hinges; F 21.336 a & b

A very finely wrought pair of hinges for use on a cupboard. Probably 18th century.
Length 4".

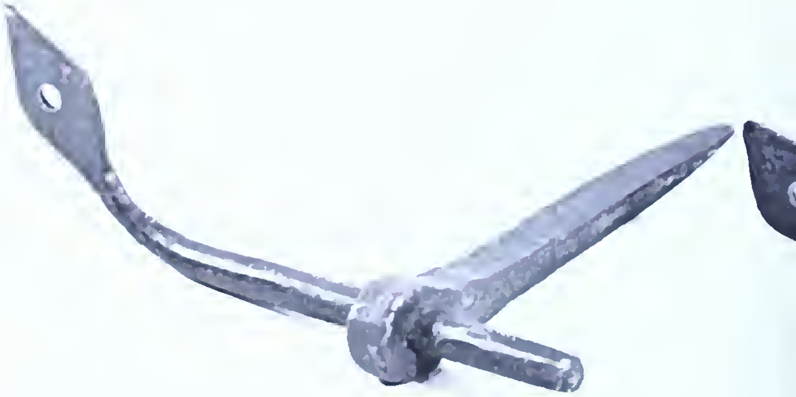
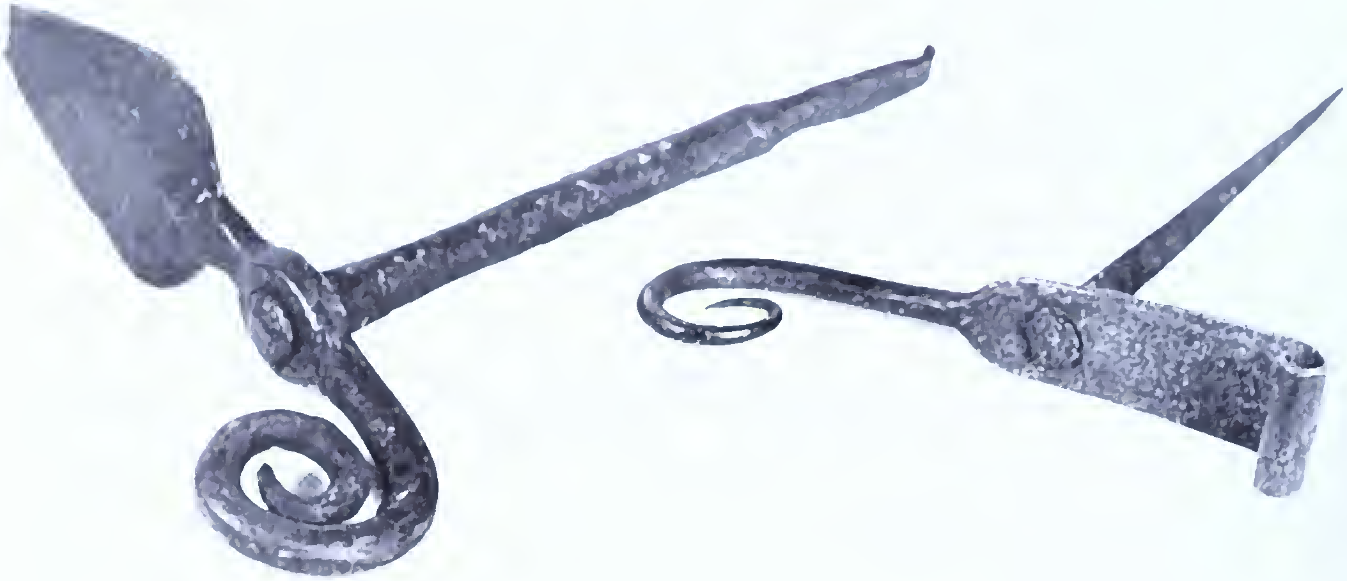


Plate 16. Shutter Fasteners; F 21.339, F 21.337

Two ornate examples of swivel fasteners; both were driven into the window sill. The boldness of the one example contrasted to the light quality of the other perhaps reflects varying tastes of either the homeowner or blacksmith. Both probably date from the late 18th or early 19th century.
5¼" and 6¾" length respectively.



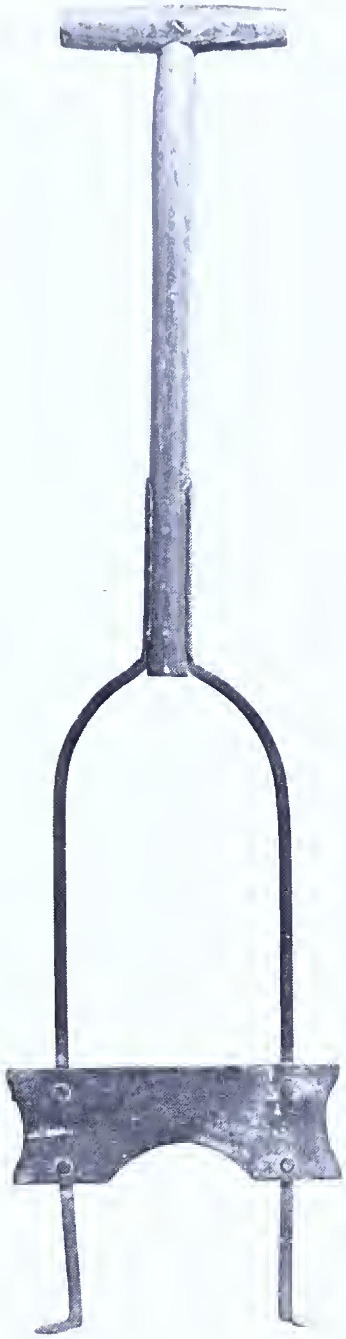
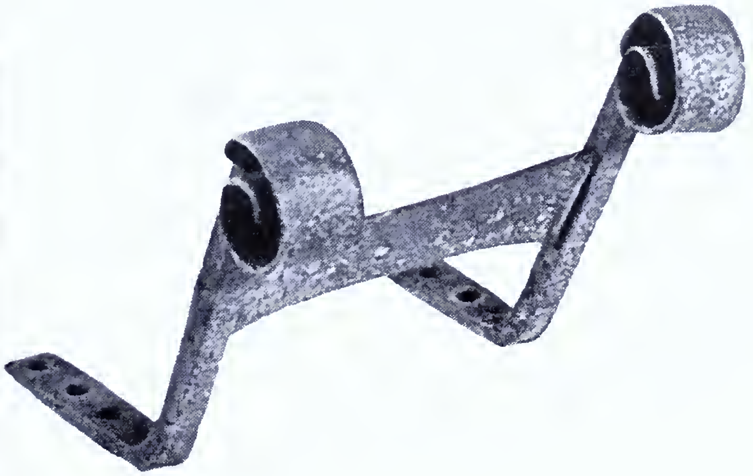


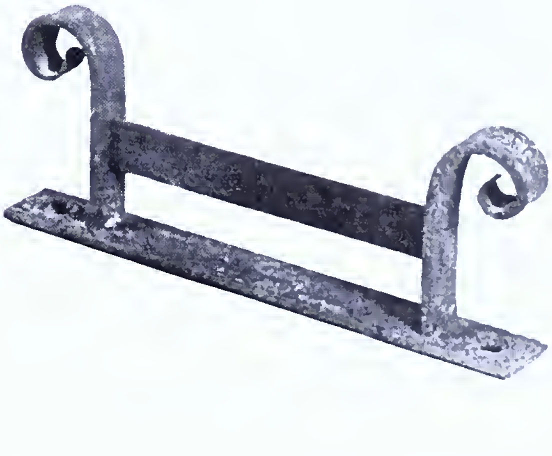
Plate 47. Portable Foot Scraper; F 24.352

Ordinarily, foot scrapers were permanently mounted into the lower stone step of an outside entrance door. We have no explanation why this example is portable. The use of commercially available iron stock indicates it dates from the latter half of the 19th century. Height 36½″.

Plate 48. Foot Scraper; F 24.350, F 24.351

Two pleasing examples designed to be attached to an entrance door step. The scroll embellishment on both was a common form of ornamentation utilized by the blacksmith. Both are of 19th-century origin.
7″ and 3½″ height respectively.





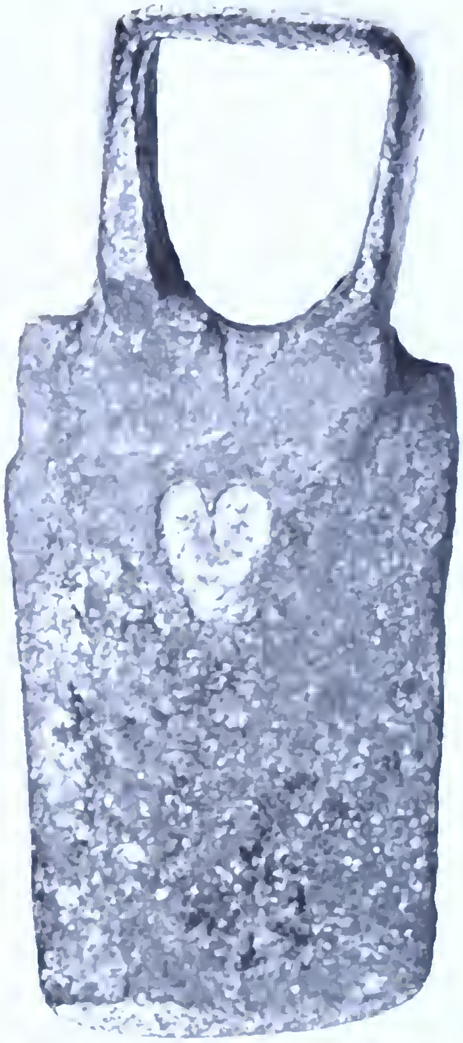
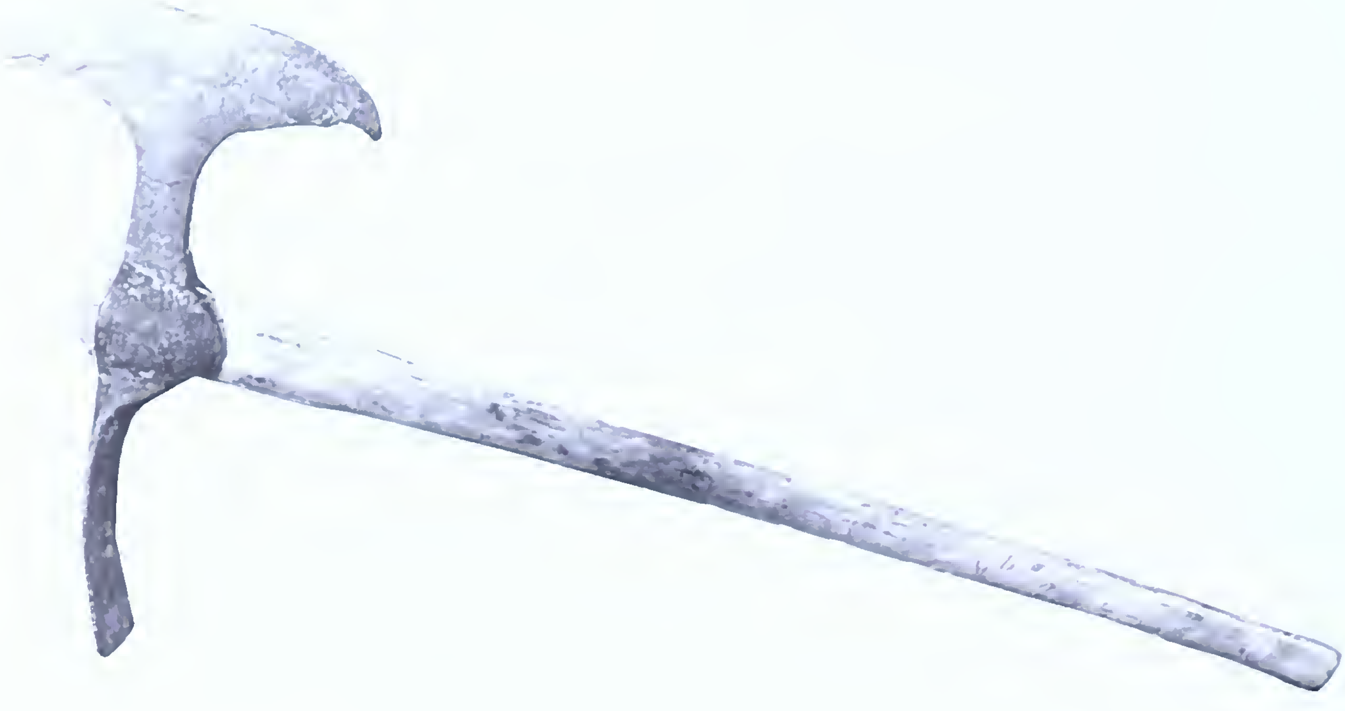


Plate 49. Garden Hoe; Anonymous Loan
A humble gardening tool exhibiting a heart motif stamped into the blade. Perhaps this reflects the thought "Urged to endow inconspicuous things with charm." 19th century.
Length 5½".

Plate 50. Mattock; F 65.33
It is believed that this tool was used to grub or dig out irrigation ditches and to trim the side walls. The workmanship is crude; a steel cutting edge is welded in the trimming head. 19th century.
Length blade to blade 18¼".



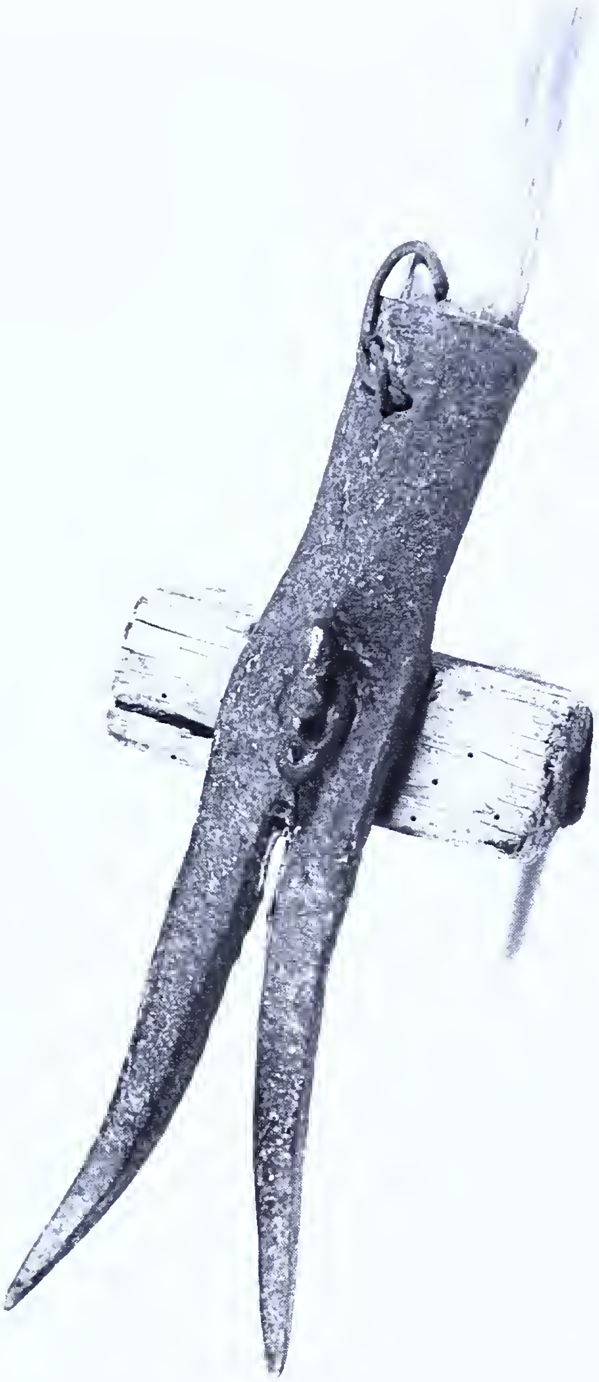
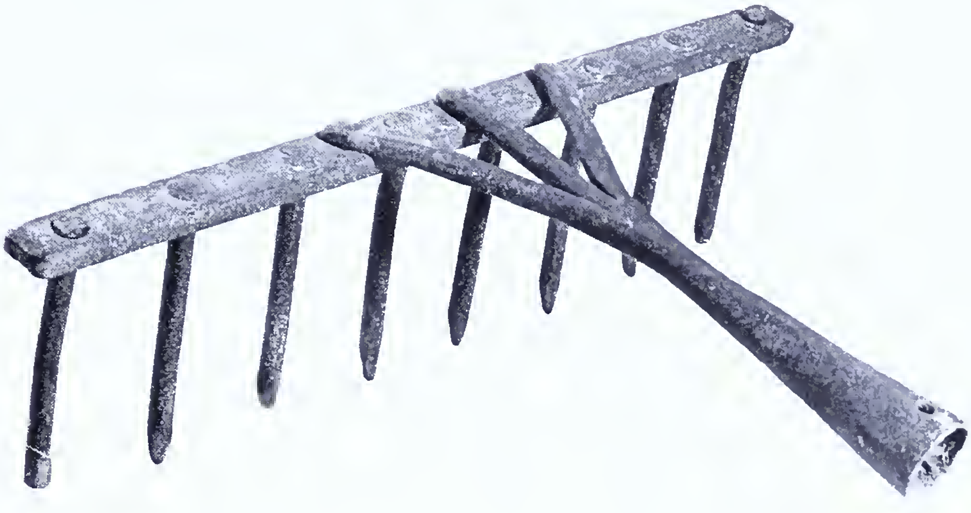


Plate 51. Grubbing Tool; F 24.354
This fork-like tool is mounted to a long wooden handle, and, combined with the wooden block beneath, would function to pry up roots and to clear fields for cultivation. Essentially crude, this item could be typical of a farm smithy. 18th or early 19th century.
Overall length 53″.

Plate 52. Rake; F 24.353
This item is made of heavy iron stock. We have two suggested uses for it: one, that it was used by a charcoal burner, and two, that it was used for beach clamming. 19th century.
Length 19″.



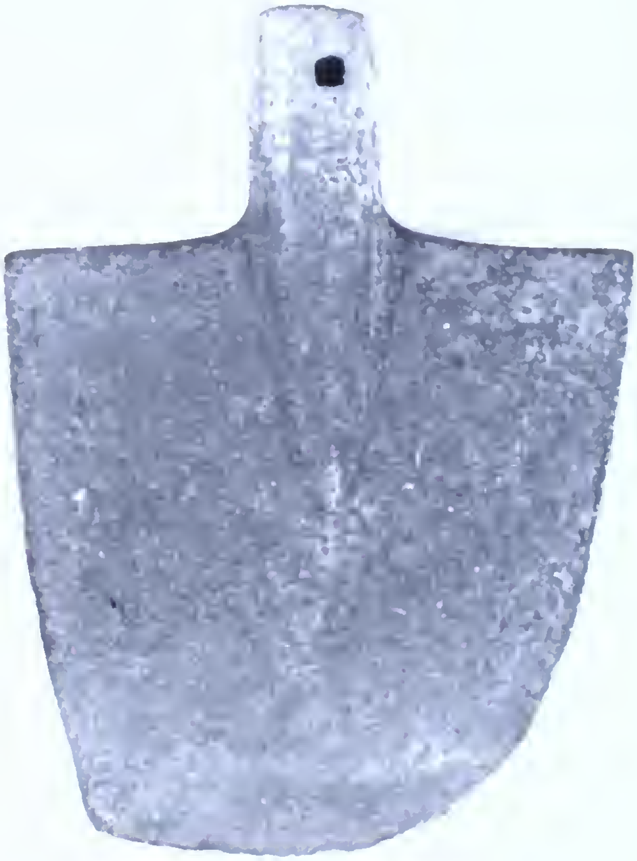


Plate 53. Spade; F 21.345

This traditional form of spade is ageless. Drawings from the sixteenth century depict iron spades very similar to this example. Probably 18th or early 19th century.
Length 11¼", width 8¼".

Plate 54. Garden Hoe; F 21.369

An elementary yet practical design of blade and teeth formed from a single piece of iron. The spike was driven into a wooden handle. It was used for breaking the ground crust and chopping out weeds. Possibly late 18th or early 19th century.
Length 6¼".

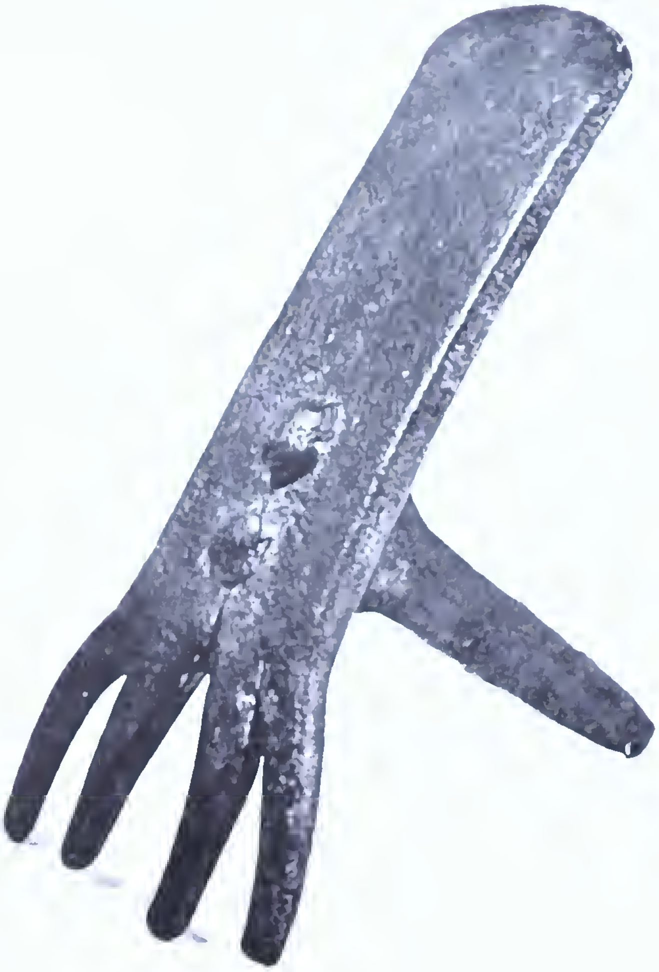
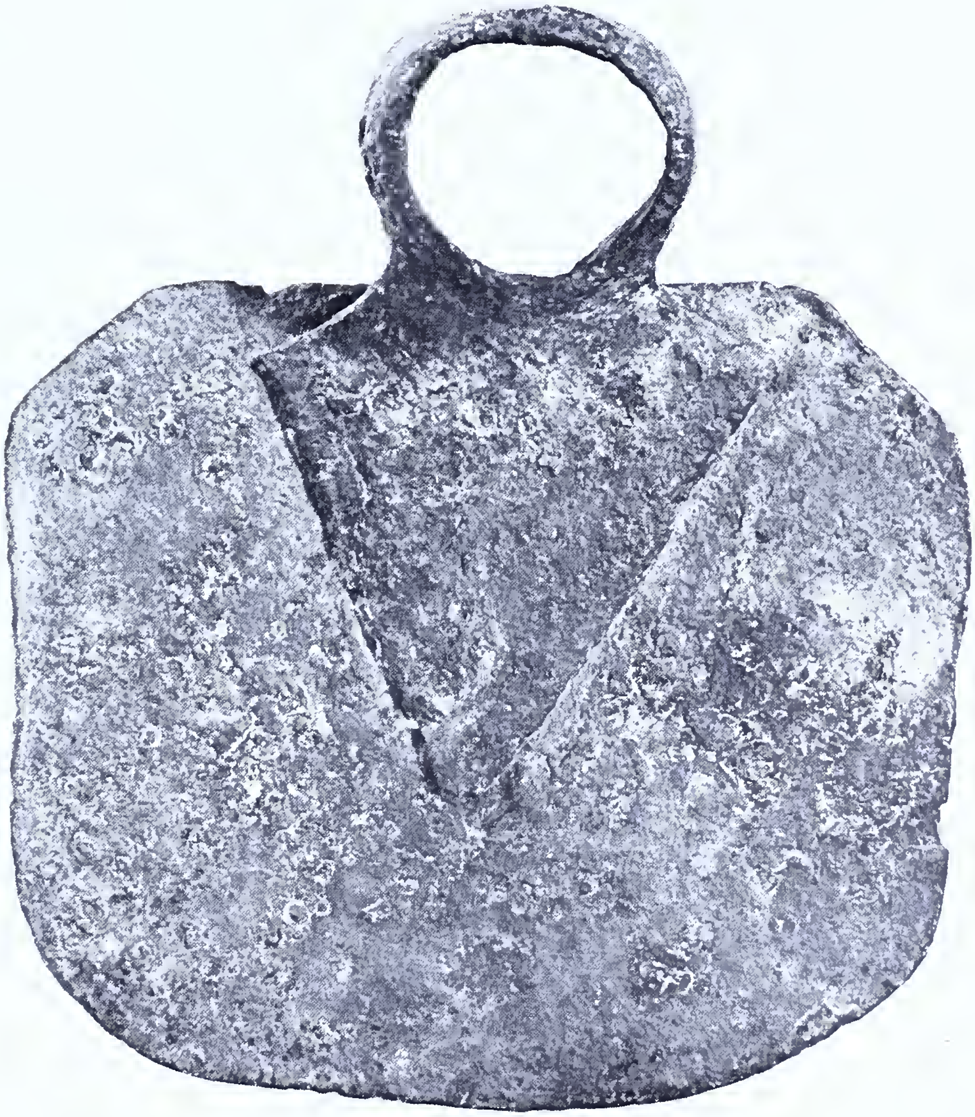


Plate 55. Hoe; F 24.344

Essentially an ageless form of cultivating tool, this hoe has its handle socket riveted to the blade. Such a basic tool could have been made at a farm smithy. Probably 18th century. Width of blade 6½″.



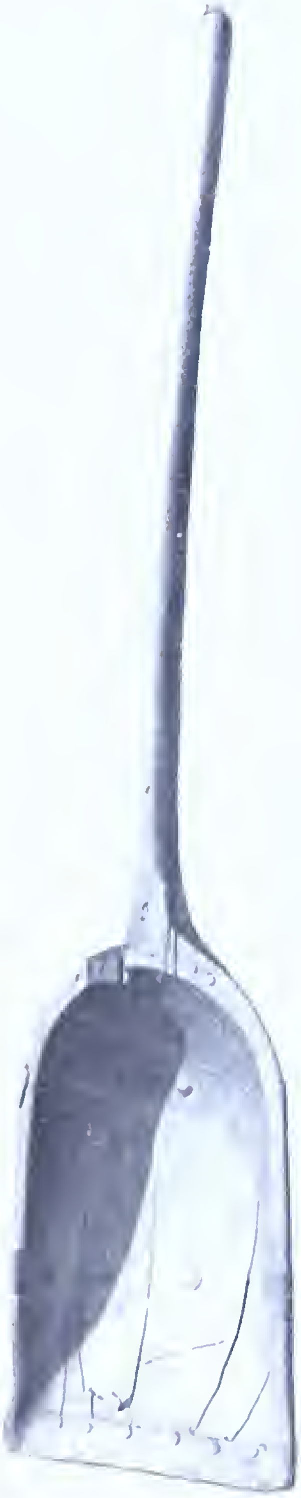


Plate 56. Grain Shovel; F 21.100

An example of the repair work which the blacksmith was often called upon to do. The shovel, cracked in four places, is neatly held together by three iron bands riveted to the wood. 19th century.
Length 61½".

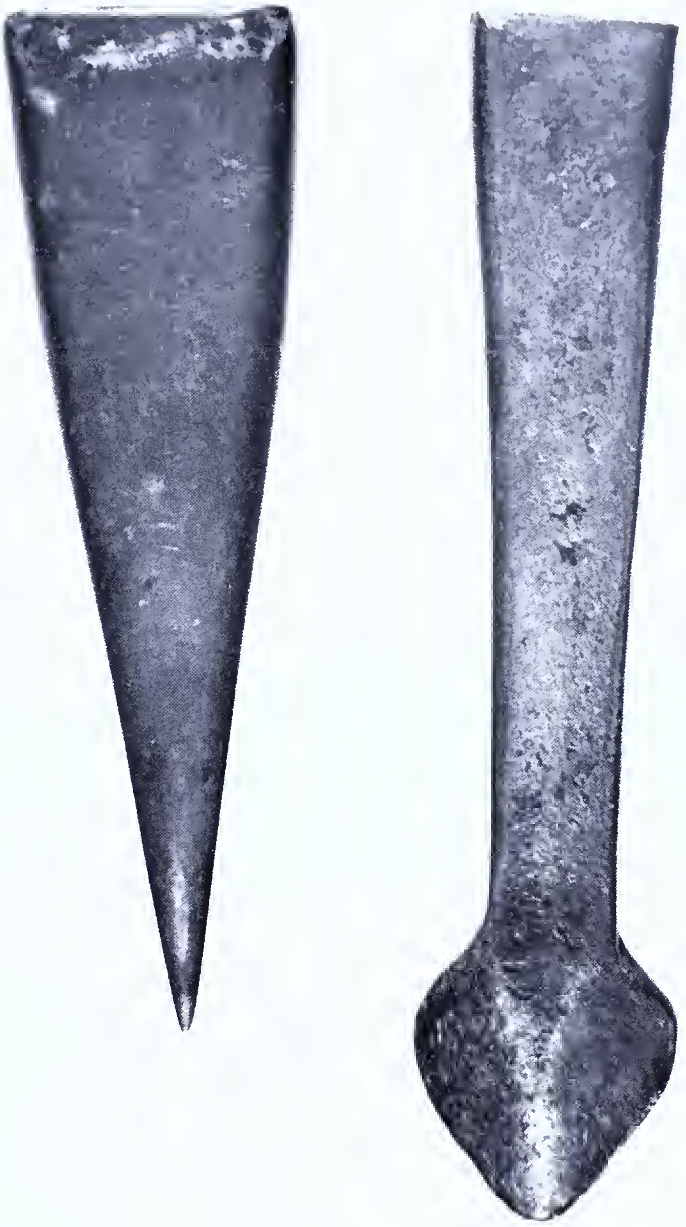


Plate 57. Tobacco Spears;
F 24.373 and F 10.236

The spears are hollow at their wide end; a wood lath was fitted into this hollow socket and tobacco stalks were then pushed on the pointed spear and onto the wooden lath. The lath, containing twelve to fifteen stalks of tobacco, was then hung in a curing shed. Both examples are 19th century.
Length 6¼" and 7¼" respectively.

Plate 58. Cornhusking Pins;
Anonymous Loan

Husking pins were found on every farm. They were used to remove the husks from the ears of corn. This was primarily late fall and winter work for the farmer and his family. Handmade husking pins were also made from bone and wood. Both examples are probably of 19th-century origin.
Length 4⅜" and 5⅛".

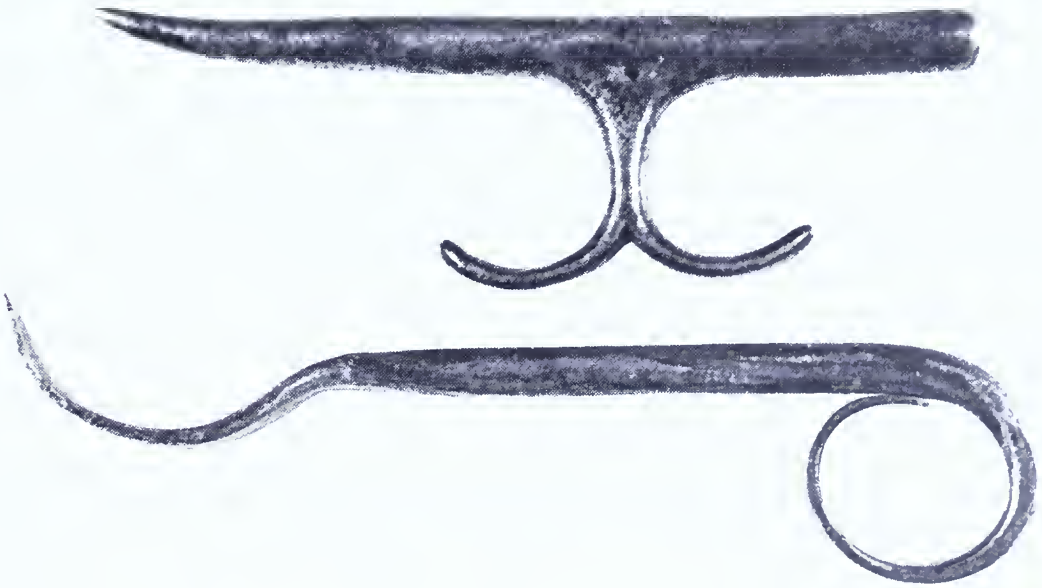
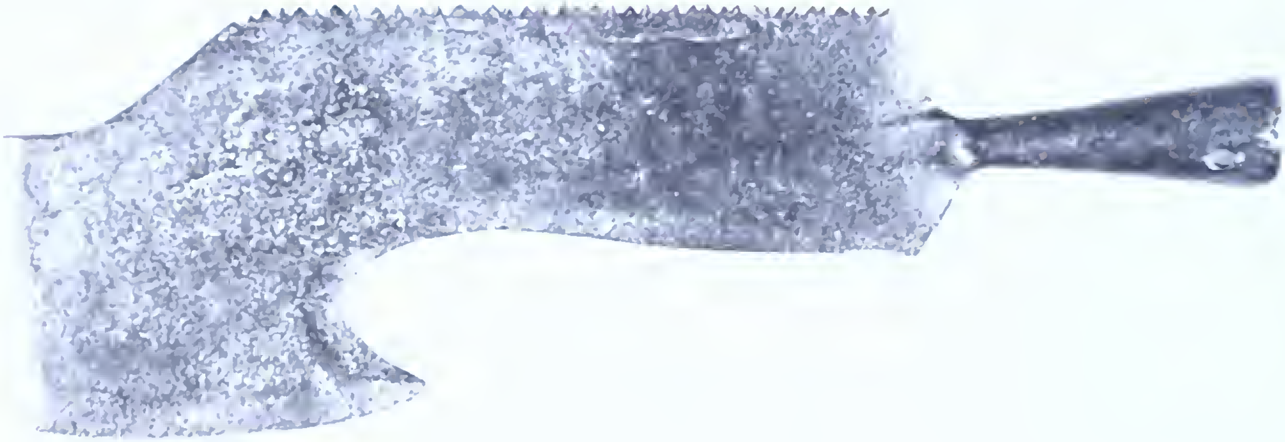


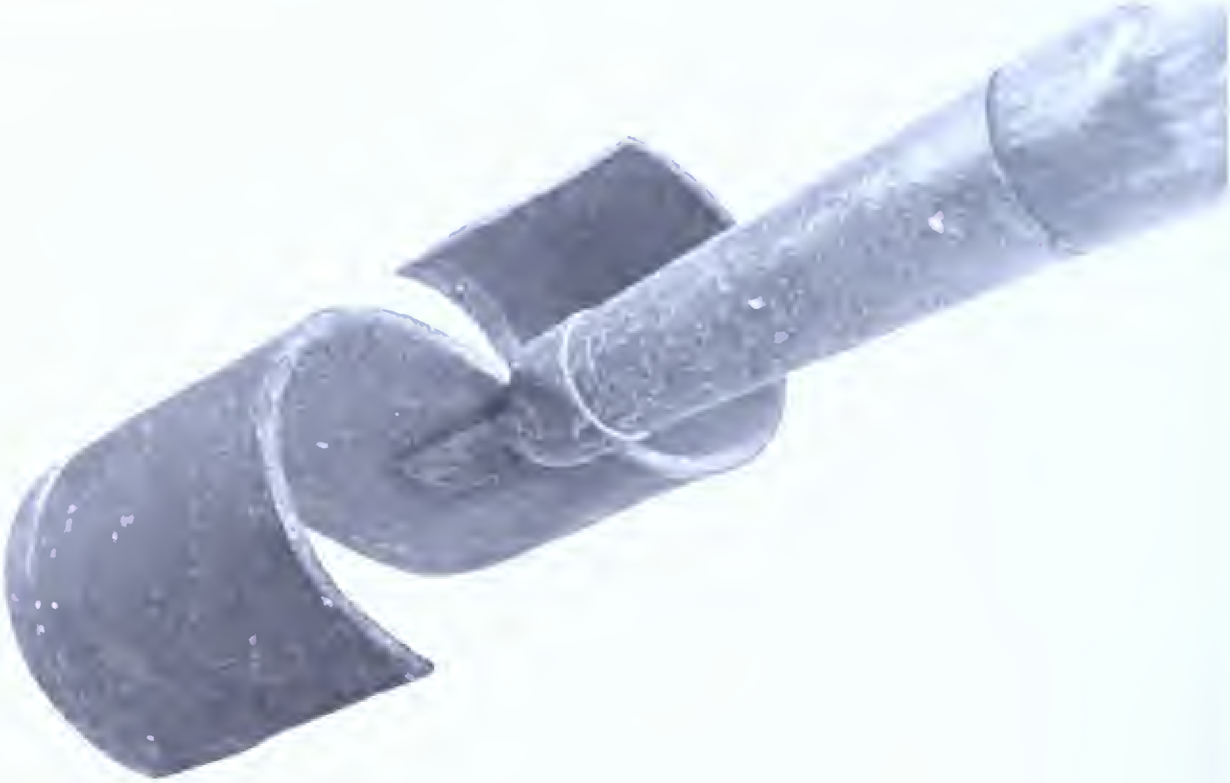
Plate 59. Pruning and Grafting Tool; F 21.397

Three tools in one are reflected in the design of this tool. The saw edge, chopping edge, and bill hook were probably combined to the special order of a customer by the blacksmith. 19th century.
Length 11¼".

Plate 60. Squash Chopper; F 10.240

This tool was used to chop pumpkins and squash into cattle and pig food. It is a tool typical of the many individual forms made for everyday use about the farm. 19th century.
Length of blade 6¼".





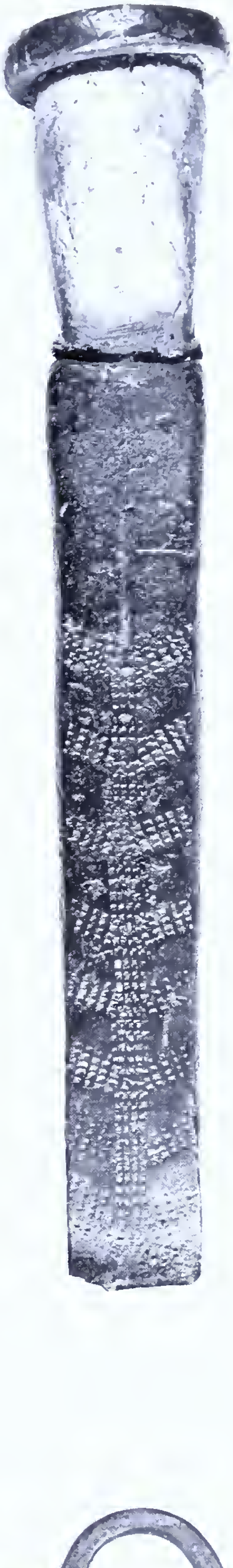
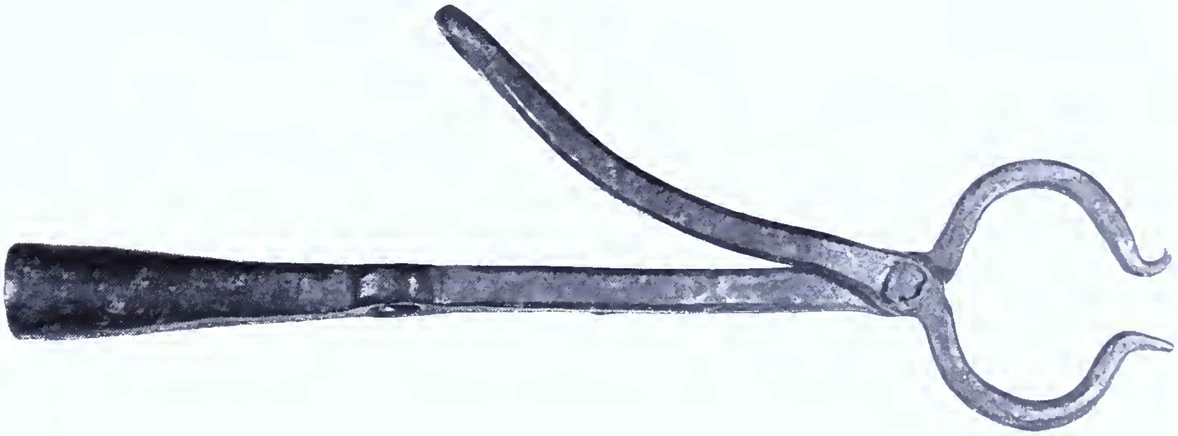


Plate 61. Splitting Wedge; F 24.347
In our present day and age, it is difficult to comprehend the mental nature which would dictate the embellishment of such a humble tool, however important, as a splitting wedge. To some degree, the grid-like surface probably helped to prevent the wedge from moving side to side as it was driven into the log. 18th or 19th century.
Length 16″.

Plate 62. Hog Catcher; F 22.146
A useful device at butchering time, this wrought-iron tool was mounted on a long pole. By pulling a rope attached to the pivoting arm, the jaws were clamped around a hind leg, thus securing the hog. 19th-century origin.
Length 14″.



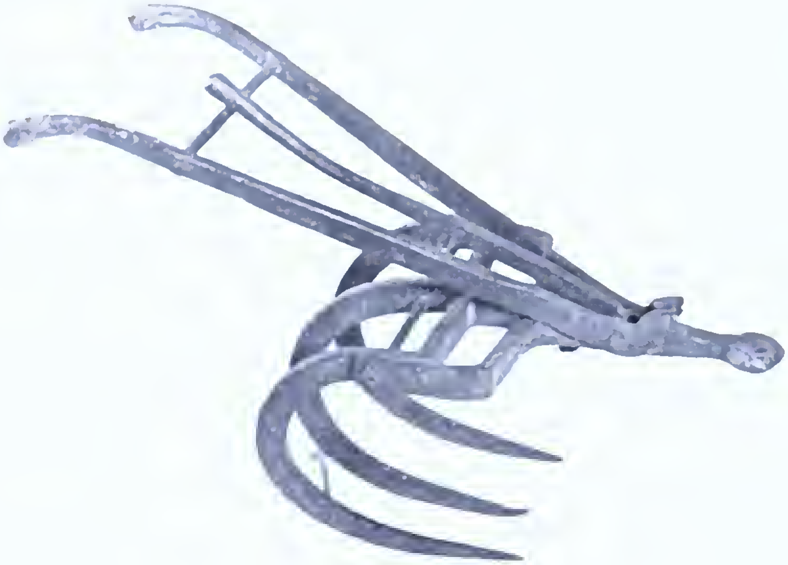


Plate 63. Model of a Manure Fork; F 22.324

We like to think that this model served as a salesman's sample, although it may have been intended for a patent model. The full-scale implement, horse drawn, was used to clean manure out of the stable entries. Probably mid-19th century.
Length 9".

Plate 64. Cow Restraint; F 9.957

This device is made of wrought iron and wood. It was placed over the cow's body immediately forward of the hind legs and pulled tightly. The tightening forced the wooden balls into the animal's sides, thus immobilizing the hind legs, mainly to prevent the cow from kicking during milking. The device possibly dates from the early 19th century.
Length 25".

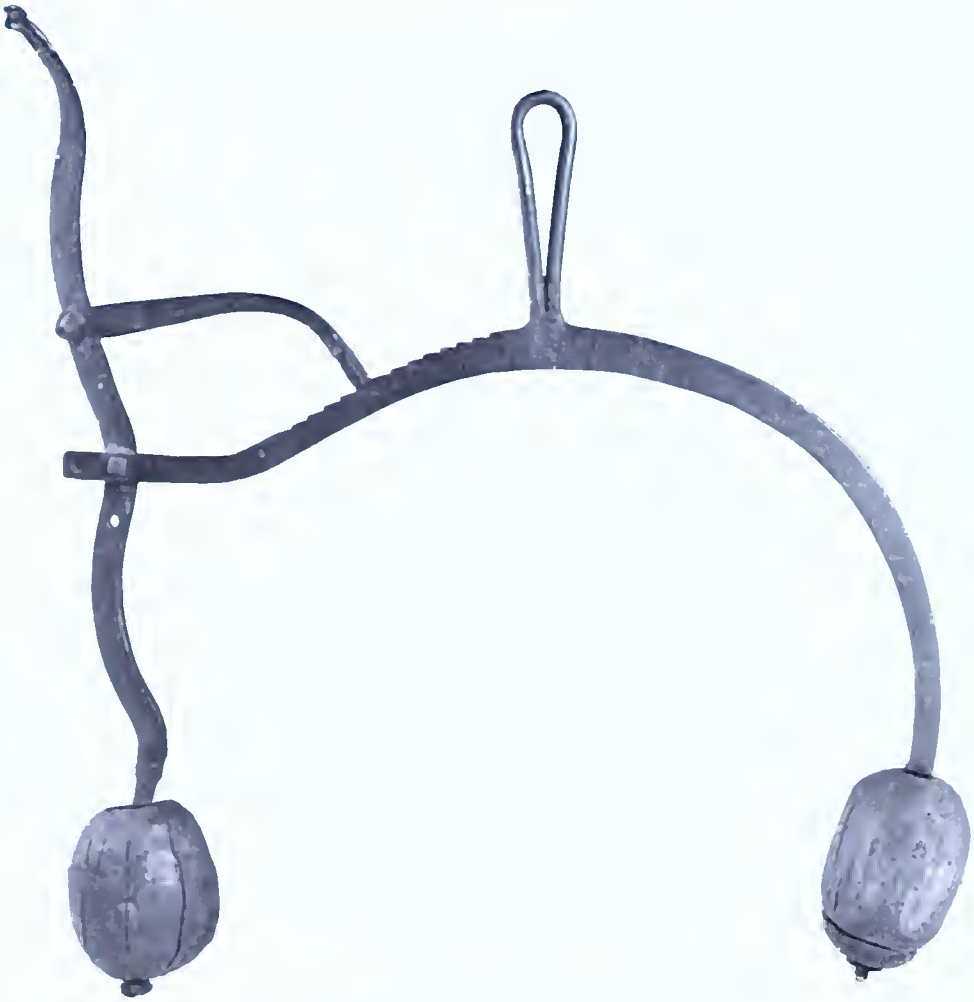


Plate 65. Plow; F 11.76

Characteristics of ancient plow design are present in this example in that the wrought-iron coulter and wooden moldboard are separate elements. In the modern plow both are combined into one unit which efficiently cuts and turns the earth. This example is late 18th or early 19th century in origin.
Overall length 7′ 9½″.

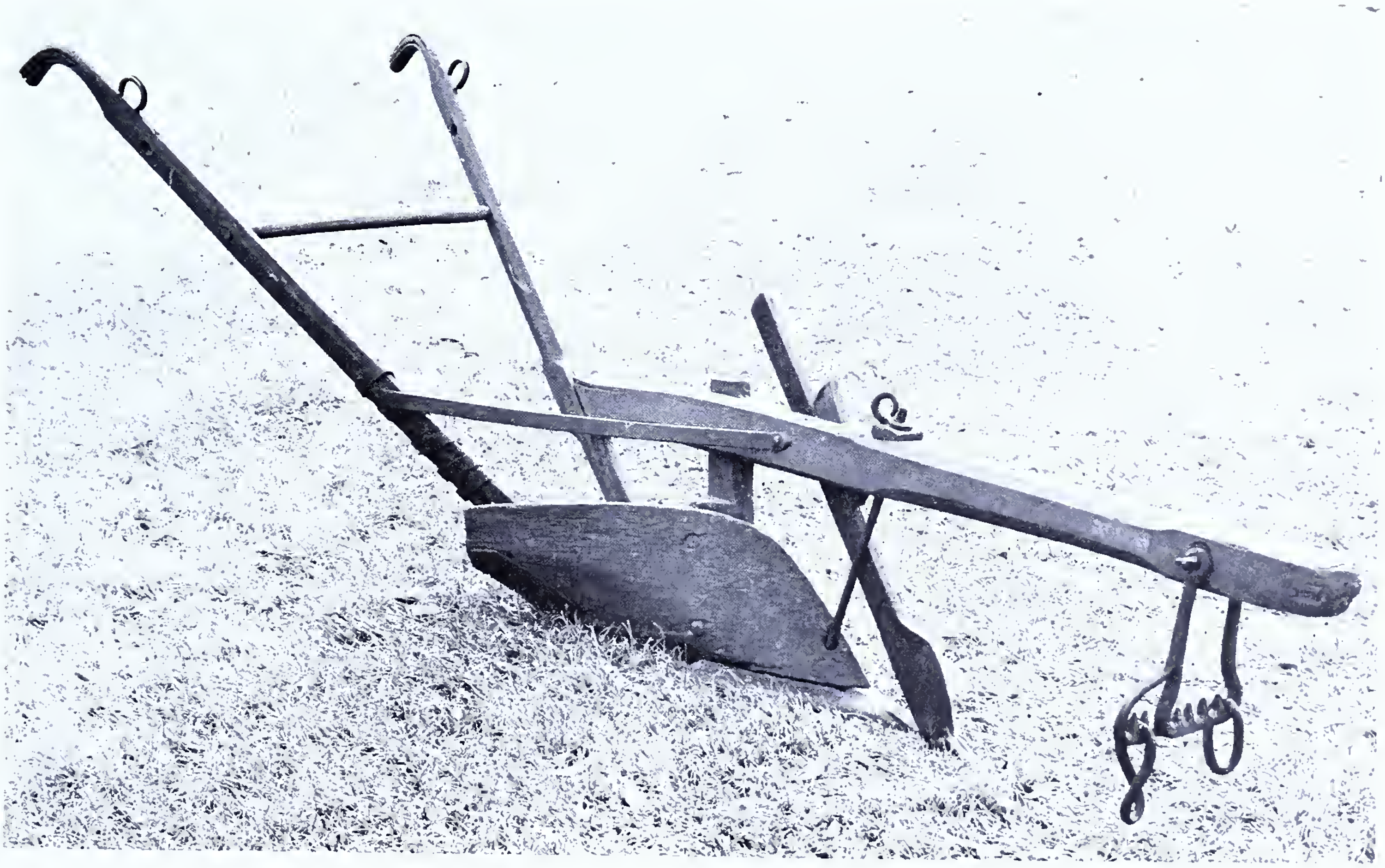
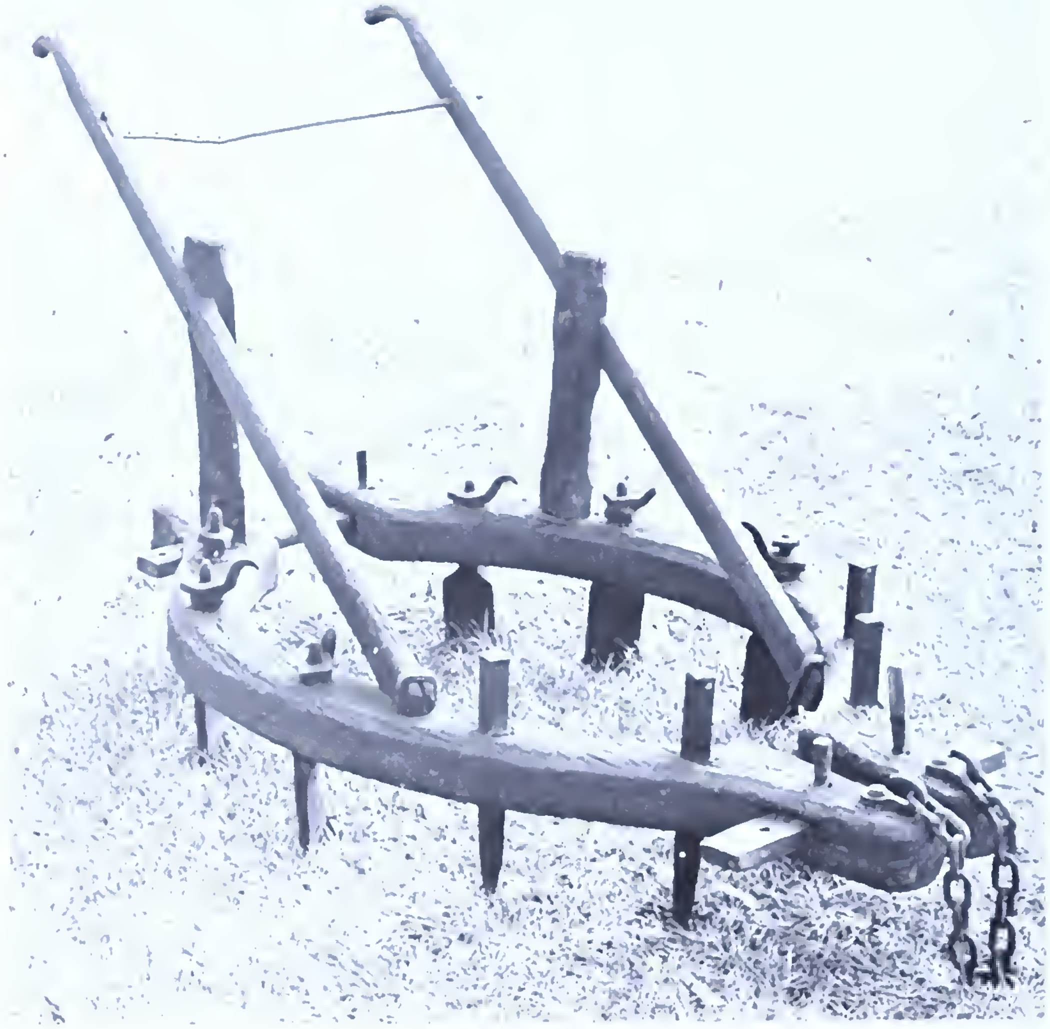


Plate 66. Horse-drawn Cultivator;
F 11.503

The rounded or "turtle" form of this implement is unique, to our knowledge. However, the form has a definite purpose in that it could be pulled over each plant row. The front spikes broke the ground crust while the rear shovel blades pushed or hilled the ground on each side of the plant row. Naturally, the implement could only be used effectively in this manner when corn sprouts, for instance, were no more than two to five inches in height. The off-centered handles allowed the farmer to walk between the rows while guiding the implement. Probably early 19th century.
Overall length 5′.



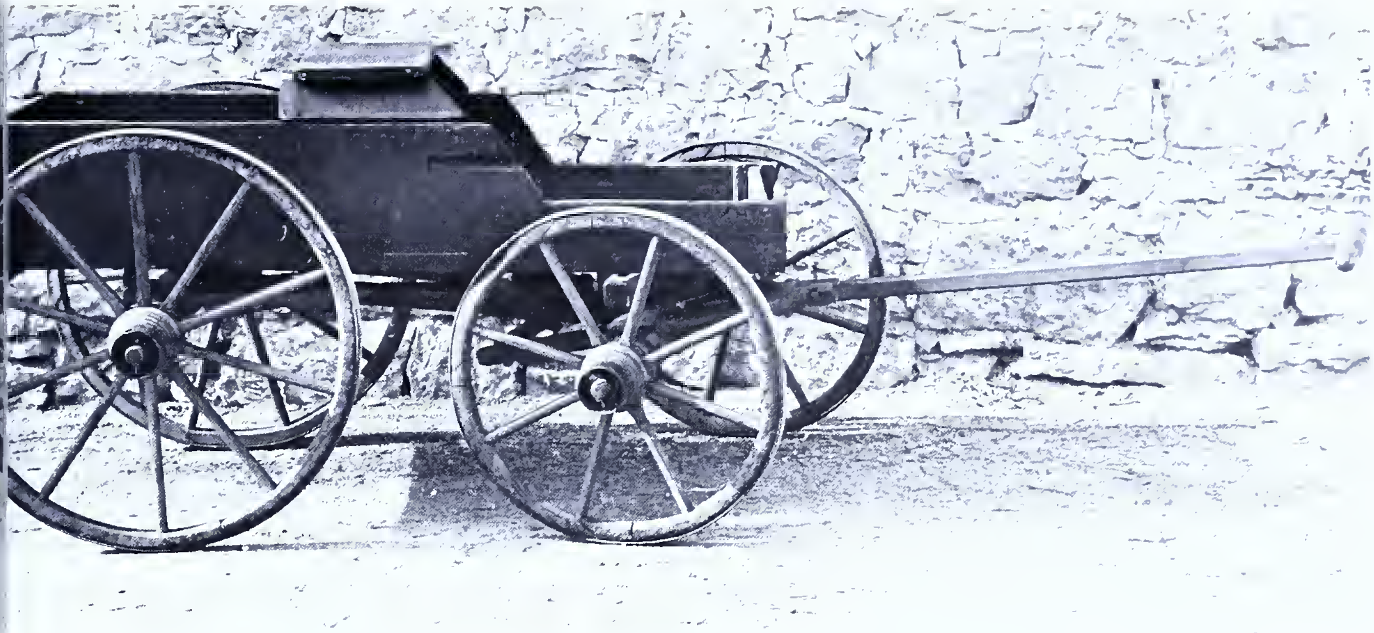
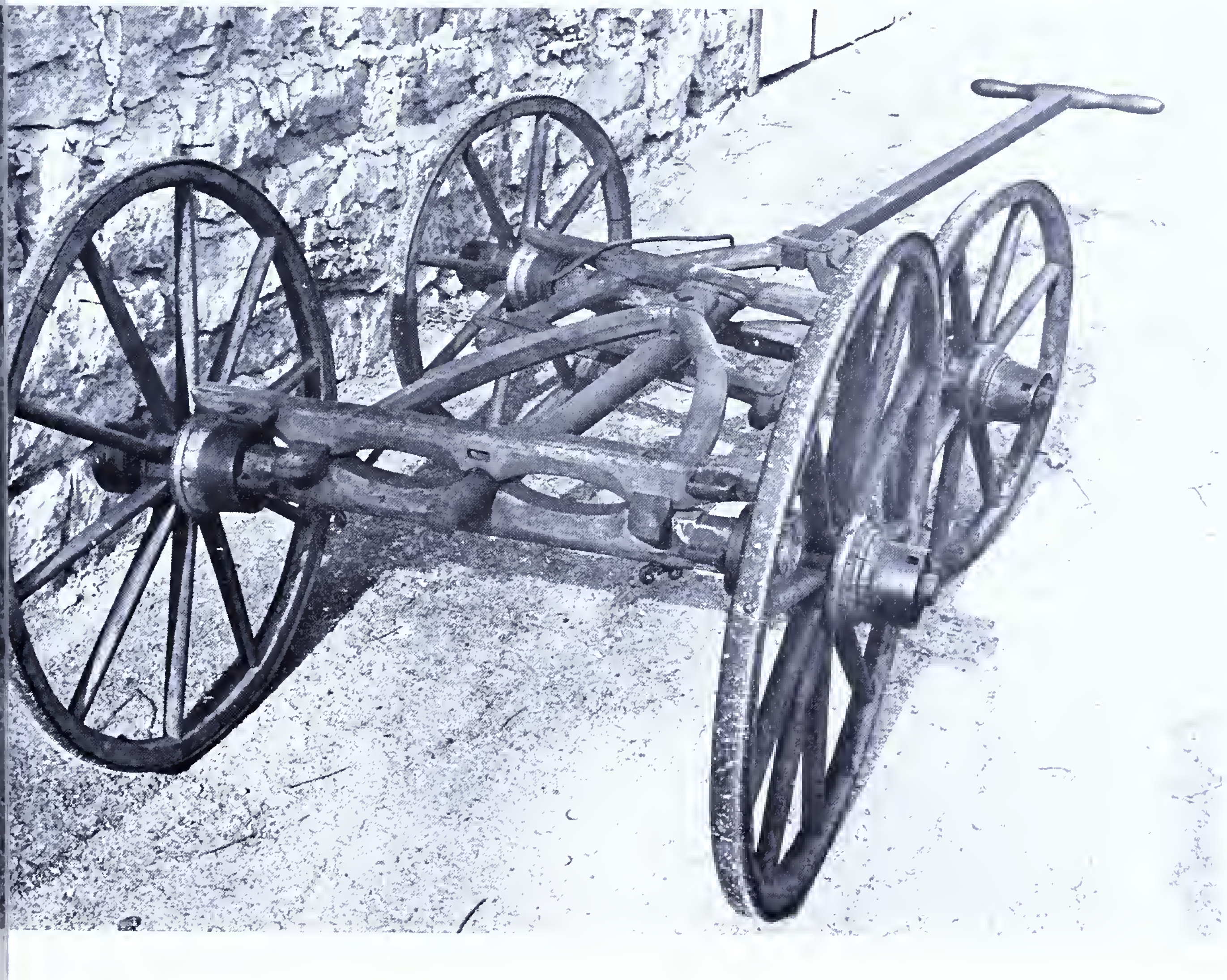


Plate 67. Farm Utility Wagon; F 24.399
The ironing of this hand wagon is of the same quality as that found on a Conestoga Wagon. Hand wagons were used for many purposes about the farm. This example was probably made in the first half of the 19th century. Overall length 7′9″.



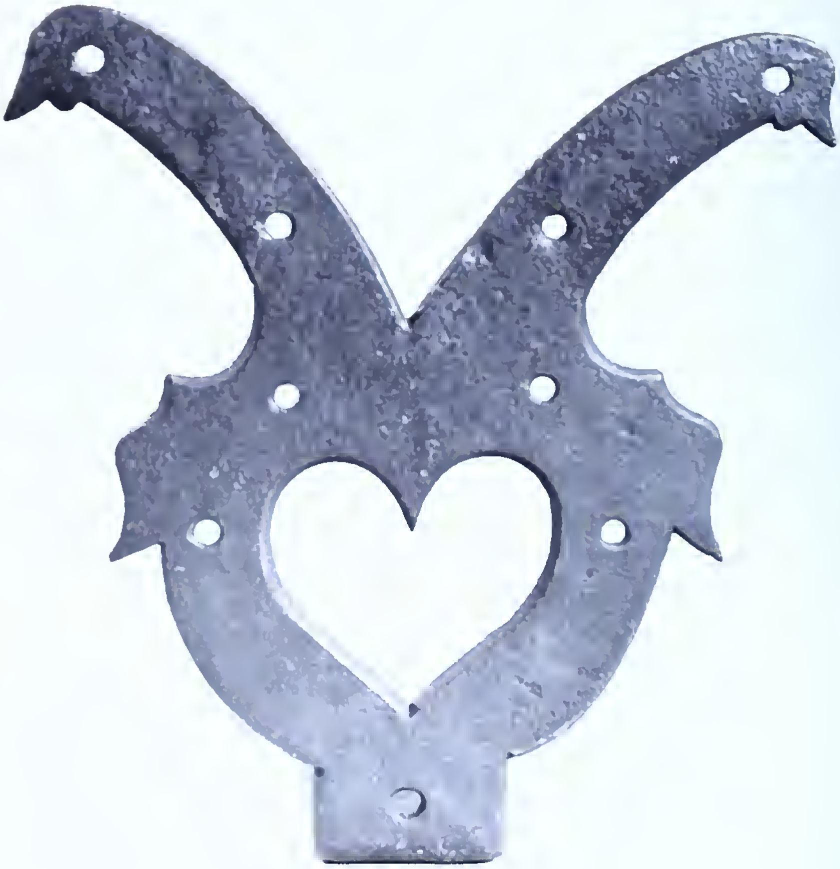


Plate 68. Conestoga Wagon Toolbox Hasp; F 23.318

This piece combines two popular motifs utilized by the Pennsylvania Germans—bird heads and the heart. Late 18th or early 19th century. Height 7″.

Plate 69. Conestoga Wagon Toolbox Lid; F 21.95

We think that this set of hinges and hasp are of mid-19th century origin, and although interesting in design, in some respects this hardware reveals a decline in design and craftsmanship. Compare with Plate 81.
Lid size 15″ × 10¼″.

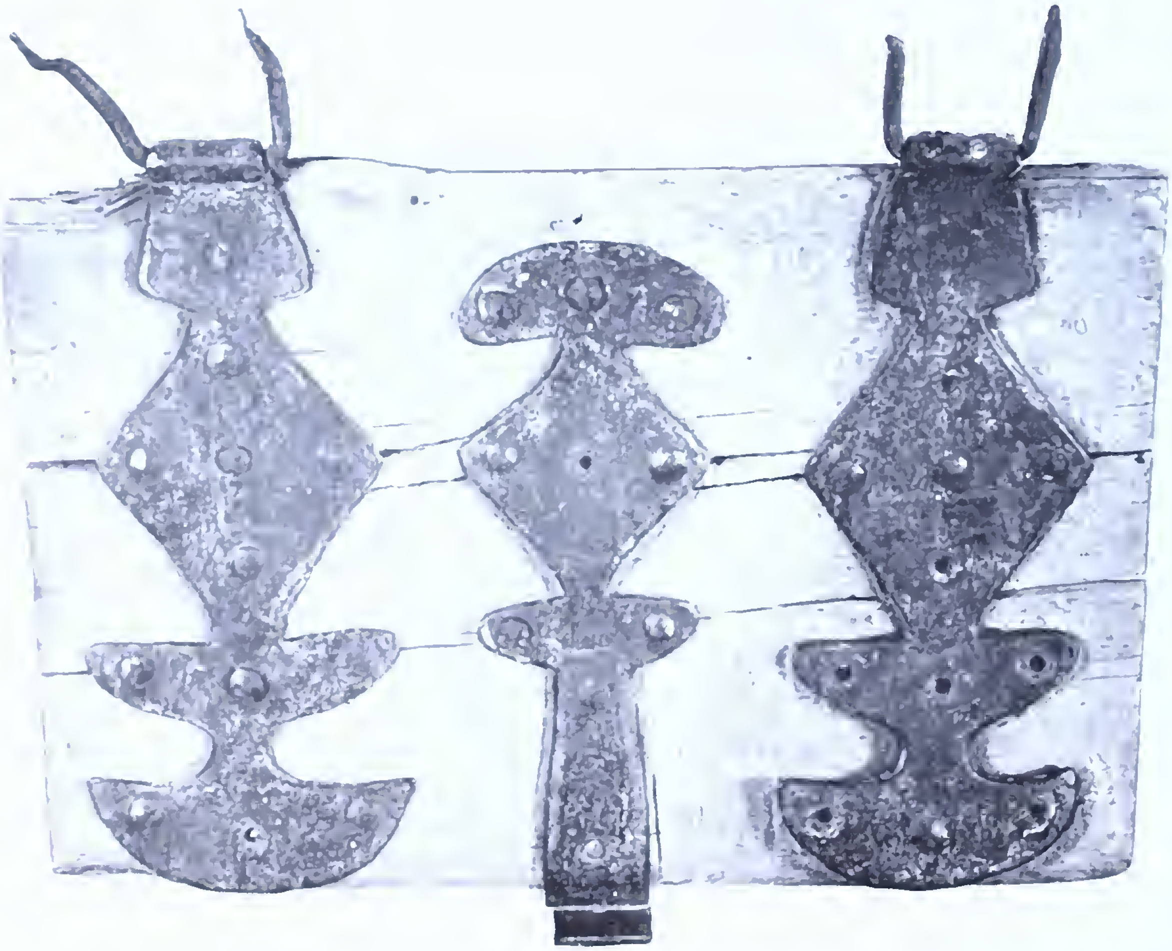
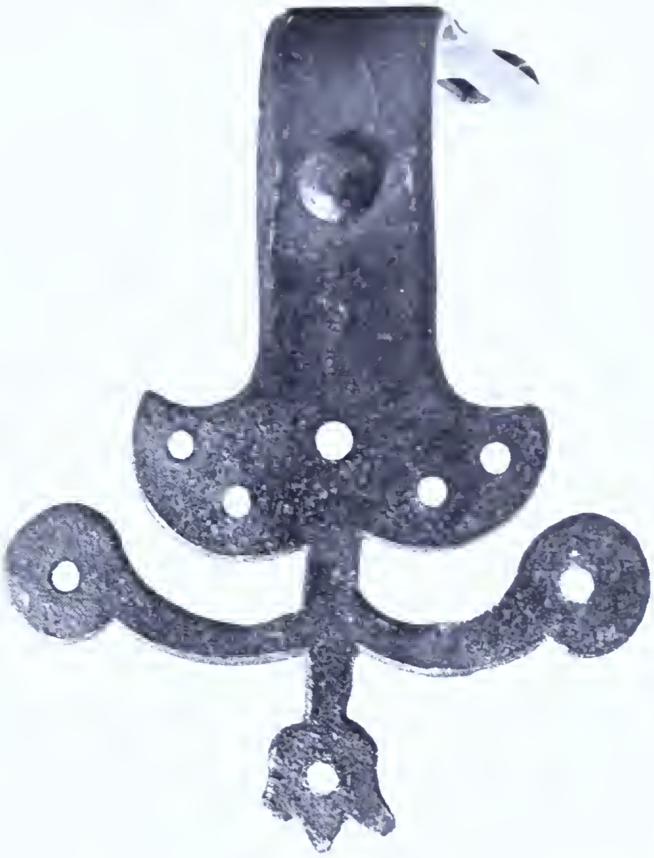


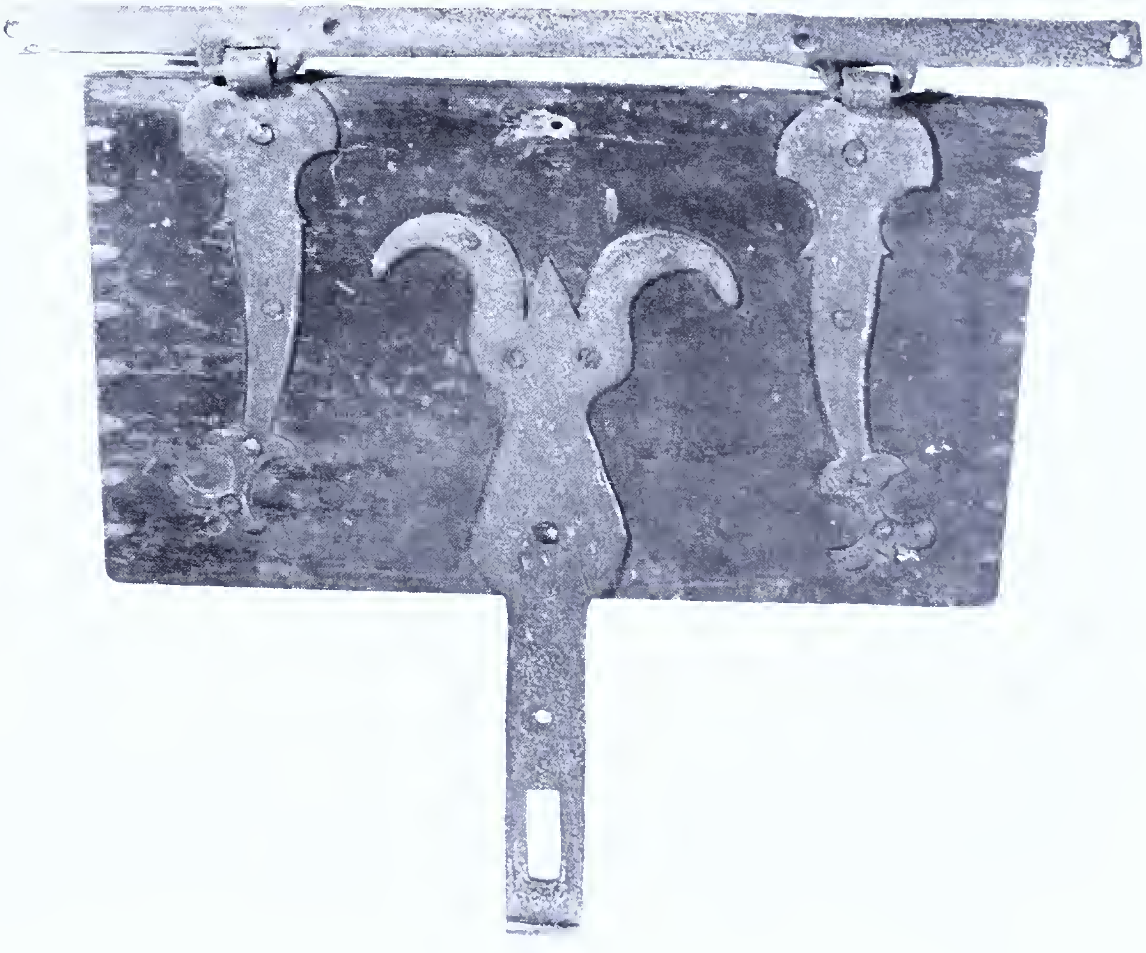
Plate 70. Conestoga Wagon Toolbox Hasp; F 23.349

When compared to Plate 68, this example shows a decline in form and workmanship. Nevertheless, this item is still highly collectible due to the comparative scarcity of this type of hardware. Mid-19th century.
Length 7½″ from tulip to bend; 5½″ length of hasp proper.

Plate 71. Conestoga Wagon Toolbox Hardware; F 24.93

The wood mounting is not the original lid, and sometime in the past the hasp has been straightened for display purposes. The wrapped hinges are an unusual feature and indicate the origin as the first half of the 18th century.
Length 16¼″, width 9¼″, length of hinge bar 19¼″.





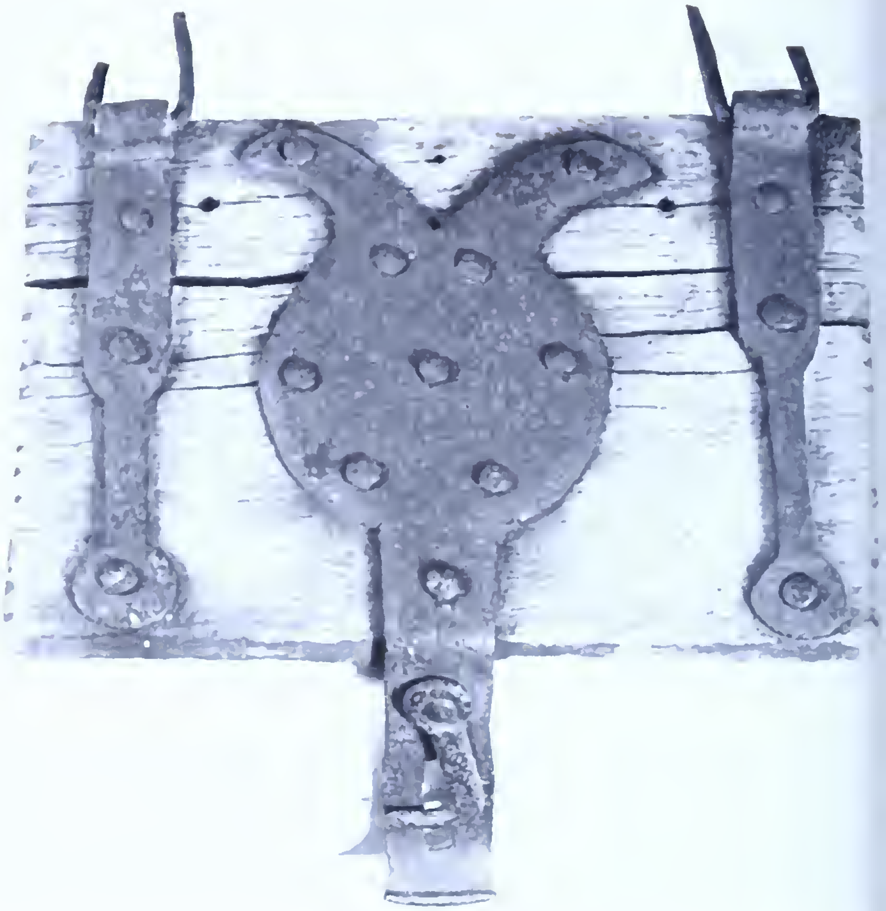
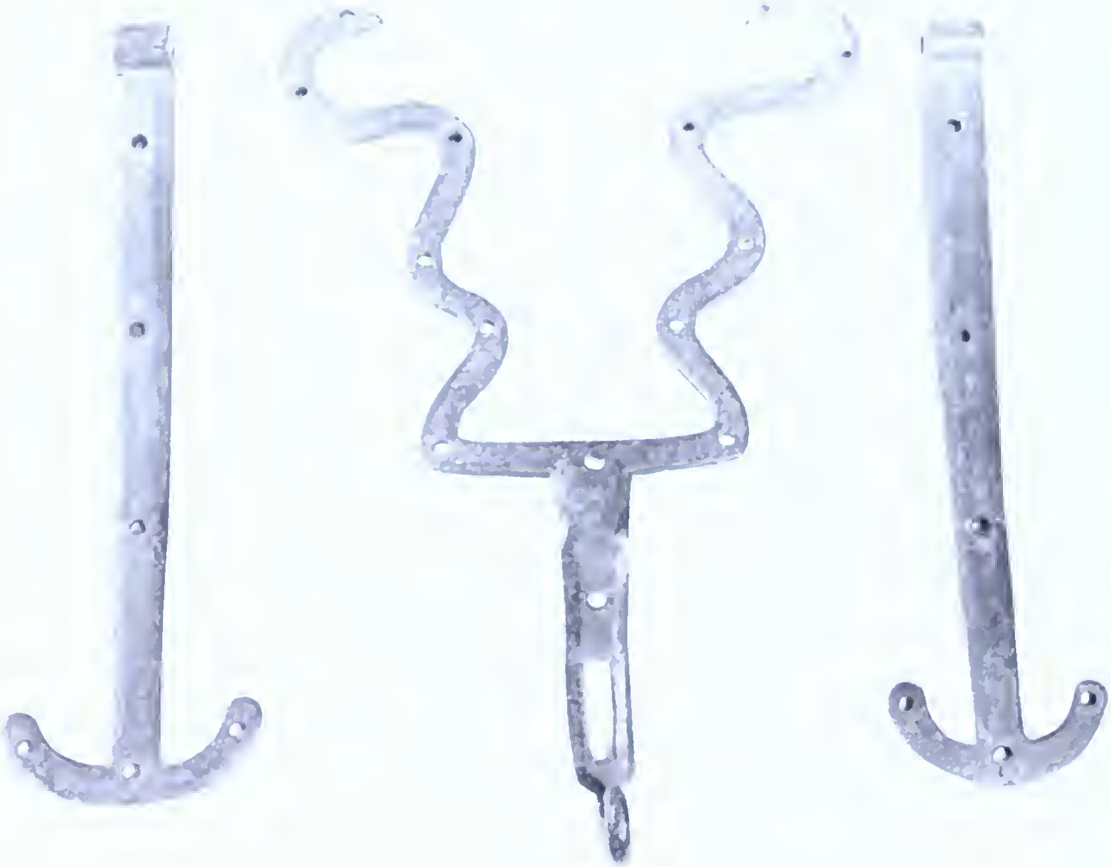


Plate 72. Conestoga Wagon Toolbox Lid; F 21.100

Decorative ironwork on the toolbox lid was not uncommon since it was one of the more prominent areas on the wagon where such work could be seen. Notice also, the side edges of the lid are notched as a further touch of embellishment. Late 18th or early 19th century. Length 11", width 7¼".

Plate 73. Conestoga Wagon Toolbox Hardware; F 23.351

An unusual set of toolbox hardware, the hinges are medieval in character combined with the zoomorphic serpent form of the hasp. The serpent motif is also found as Conestoga Wagon stay chain hooks. 18th or early 19th century. Length of hinges 12", overall length of hasp 14".



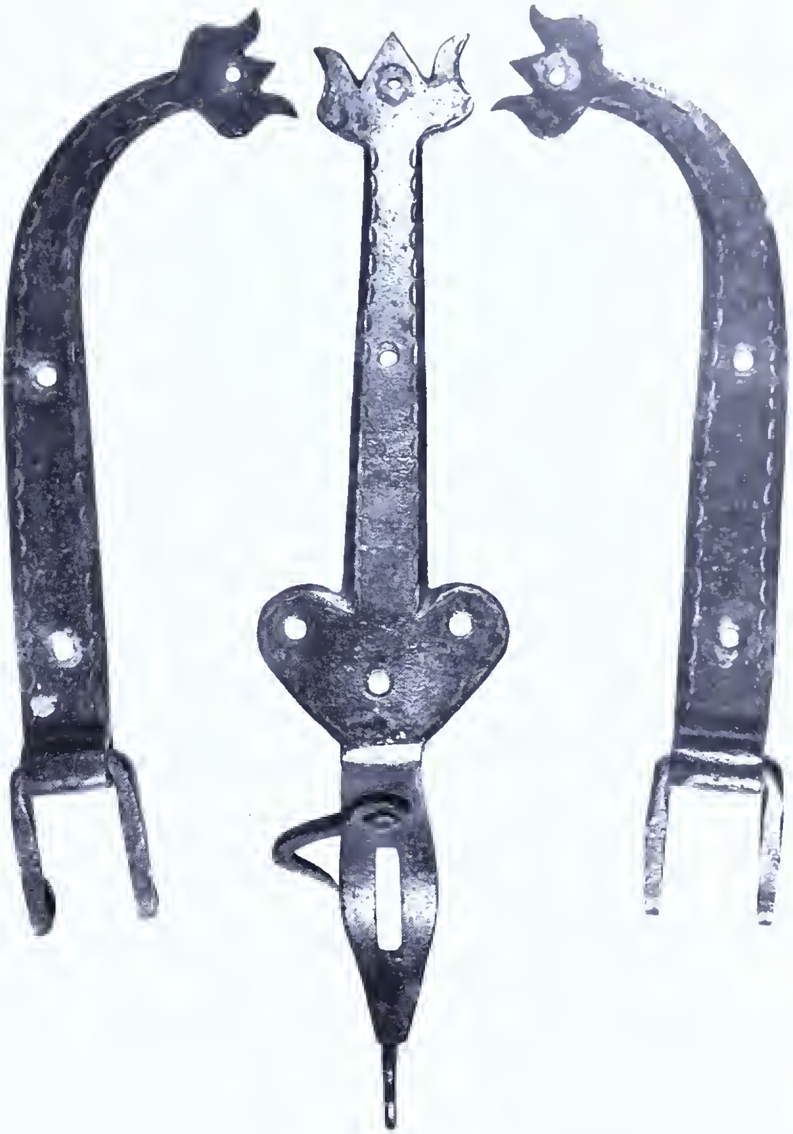
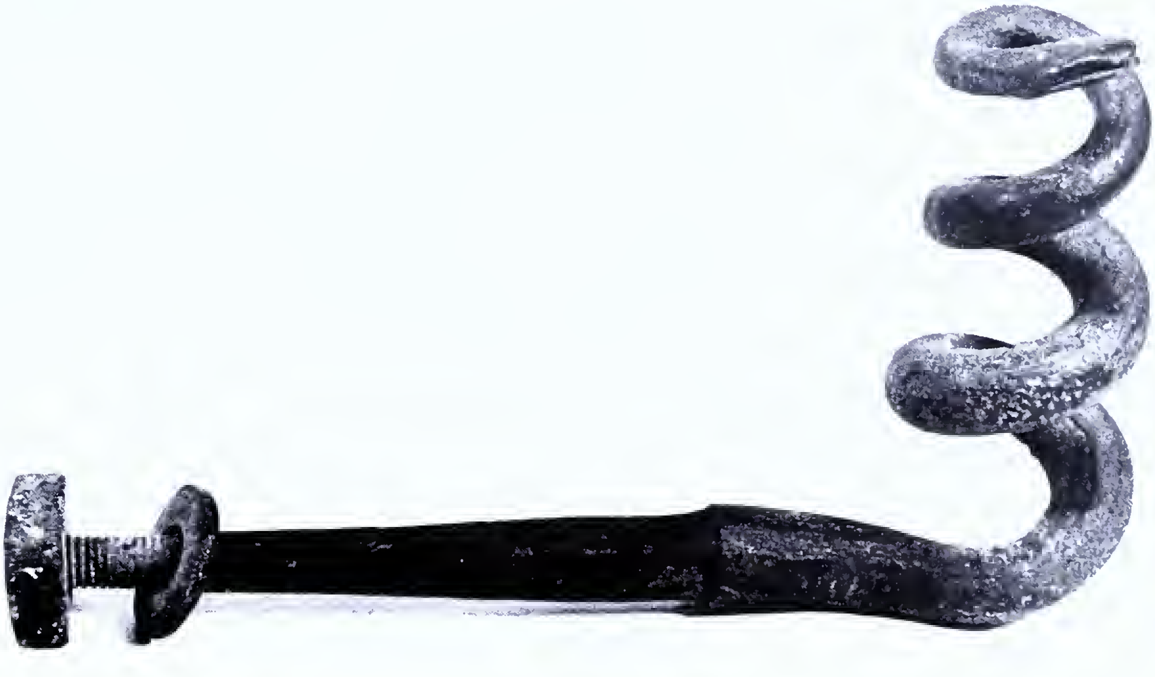


Plate 74. Conestoga Wagon Toolbox Hardware; F 23.350 a - c

The fine workmanship is indicative of the late 18th or early 19th century. The tulip and heart motifs are typically and traditionally Pennsylvania.
Length of hasp 13¾″.

Plate 75. Conestoga Wagon Stay Chain Holder; F 24.371

Our stay chain holder is typical of the fine work produced by Lancaster and York County blacksmiths, many of whom probably specialized in wagon hardware. The snake form is both decorative and practical. Early 19th century.
Length 8¼″.



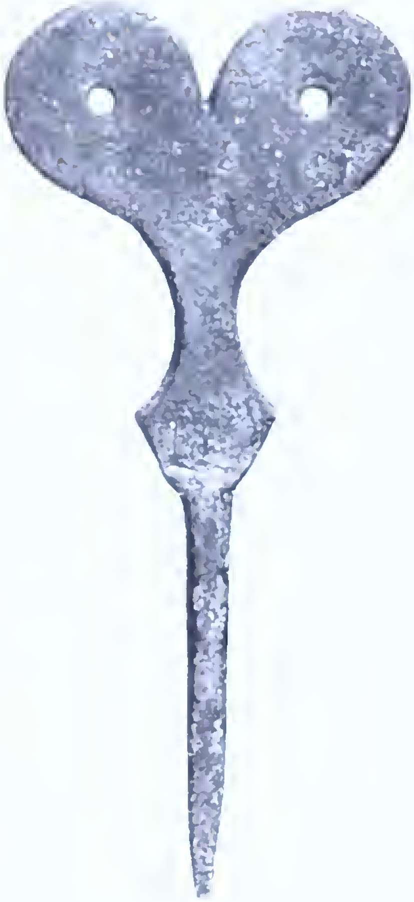
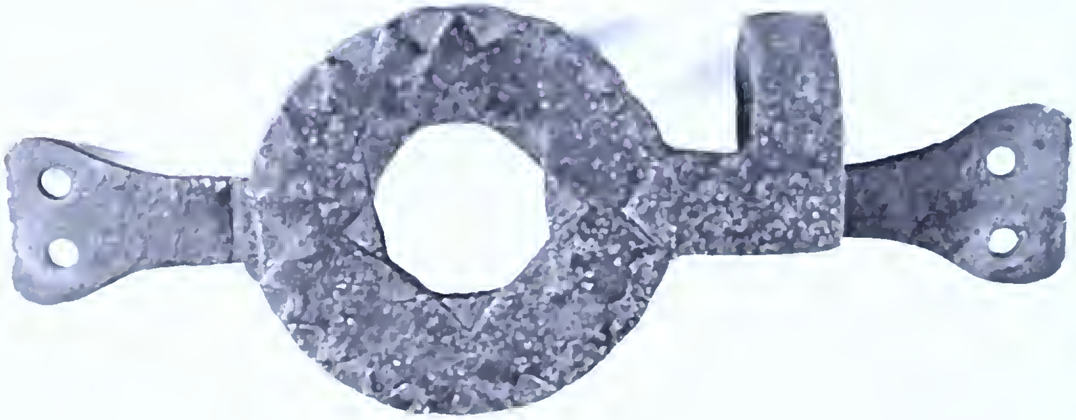


Plate 76. Coupling Pole Pin; F 24.372
Used on the rear running gear of the Conestoga Wagon to join the coupling pole to the rear axletree and rear bolster. Ironwork found on the running gear was painted the traditional orange-red color. 19th century.
Length 9″.

Plate 77. Conestoga Wagon Axe Holder; F 22.264
An entirely different form from Plate 79, but serving the same purpose. The stamped pattern is similar to that in Plate 80. 19th century.
Length 11½″.



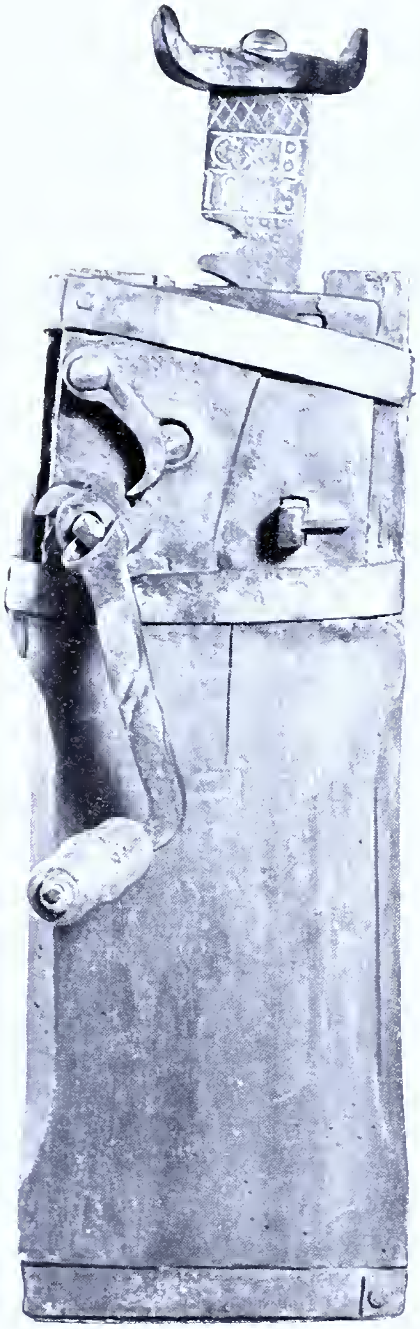
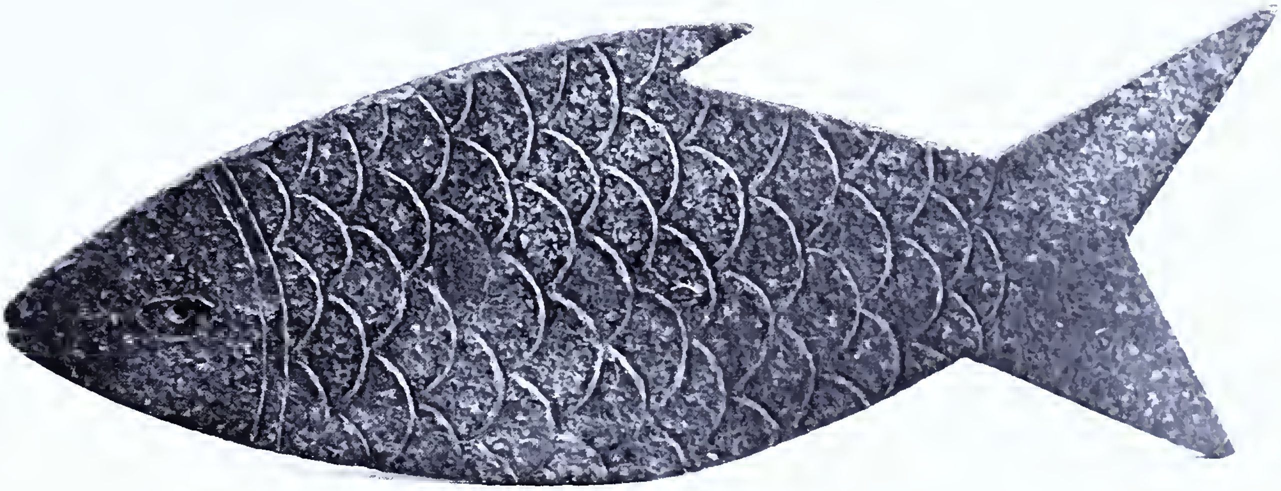


Plate 78. Wagon Jack; F 24.374

A traditional form of wagon jack utilizing a wrought-iron lifting mechanism mounted in a large wooden block. This example is dated "1865" with initials "C.B." The wooden block retains much of its original red paint. Height 20½".

Plate 79. Conestoga Wagon Axe Holder; F 24.334

The axe holder was mounted to the left front hound of the running gear. Two spikes are welded to the back of this plate and are driven into the hound. Late 18th or early 19th century.
Length 8½".



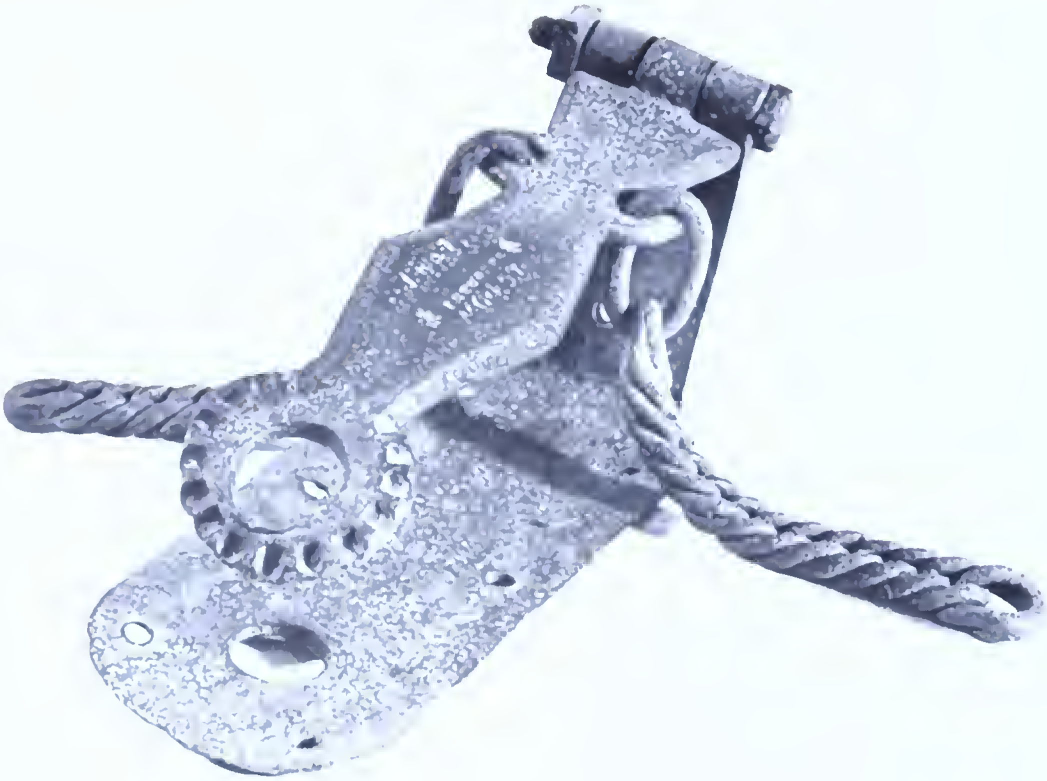
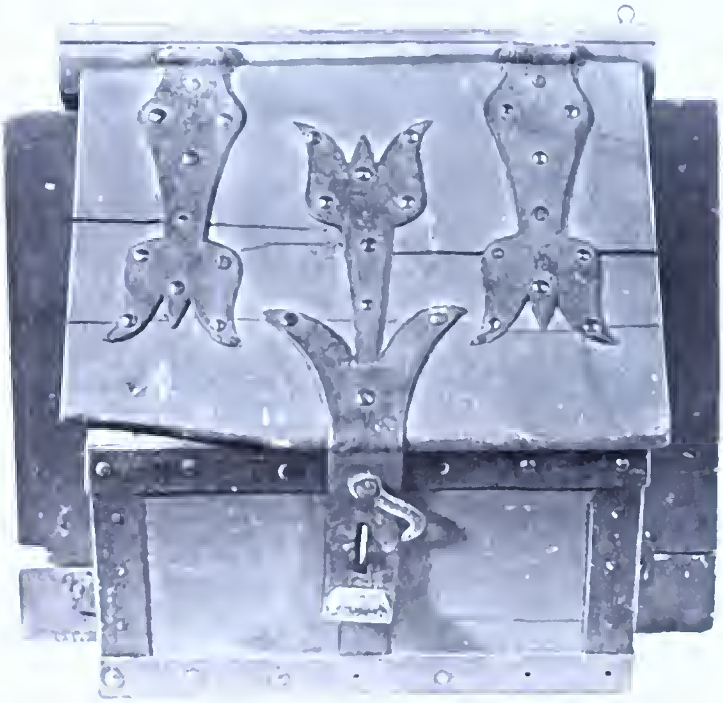


Plate 80. Conestoga Wagon Doubletree Hasp; F 21.316

The doubletree hasp was fastened to the rear end of the wagon tongue to help provide a stronger support against the pull of the doubletree. This example is dated "1837" and numbered "137." A stamped name is illegible.
Length 10¼".

Plate 81. Conestoga Wagon Toolbox; F 21.377

The hardware on this box is of excellent quality in design and execution. The hasp is signed "H S HERSH." The wagon box was an important part of the Conestoga Wagon for it held the tools and spare parts necessary for emergency repairs when on the road. 19th century.
Overall size of box: 18½" height, 16¾" width.



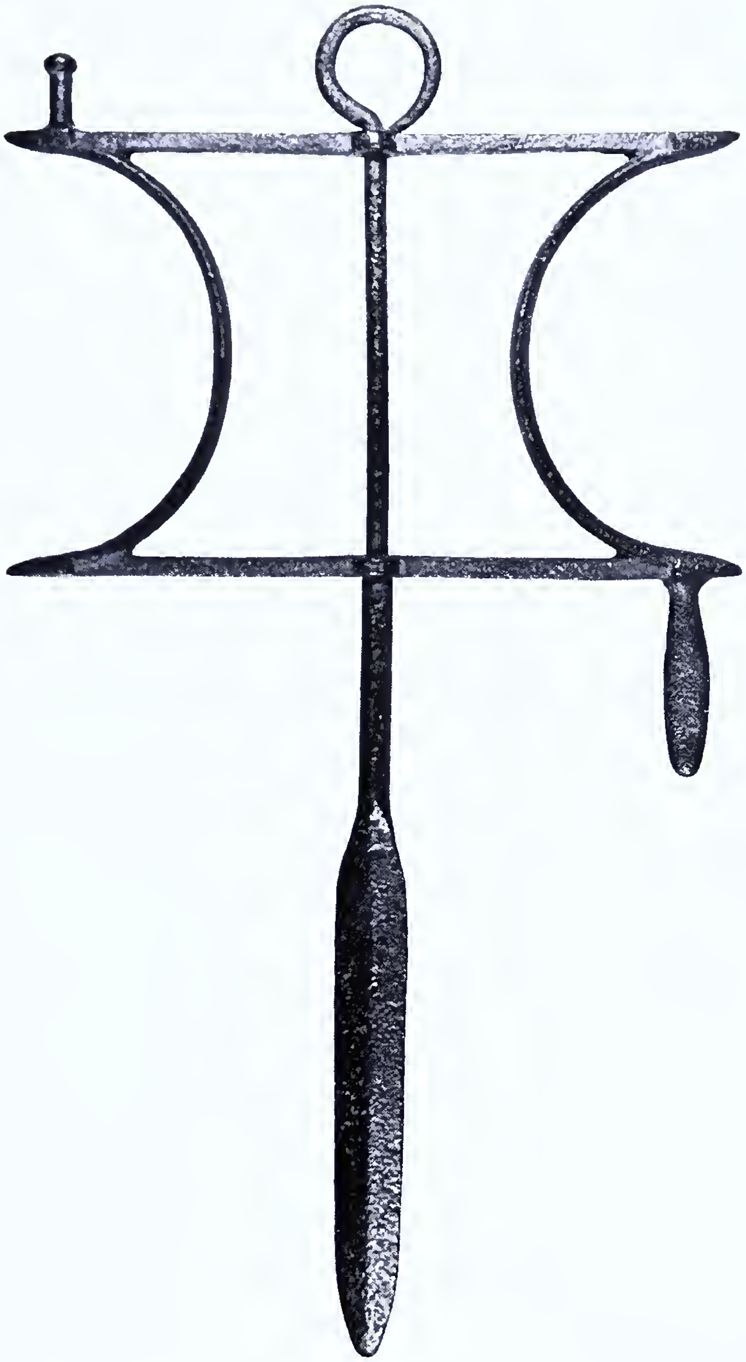


Plate 82. Reel; F 0.66

Possibly this was used by a carpenter as a chalkline reel. Workmanship on this piece is unusually fine. Possibly late 18th or early 19th century.
Length 18¾″.

Plate 83. Broadaxe; F 0.164

The blade is evenly beveled on both sides of this unusual example. The attachment of the axe to the handle by means of a bolt and wing nut is unique, to our knowledge. Probably 18th century.
Length of blade 9″.

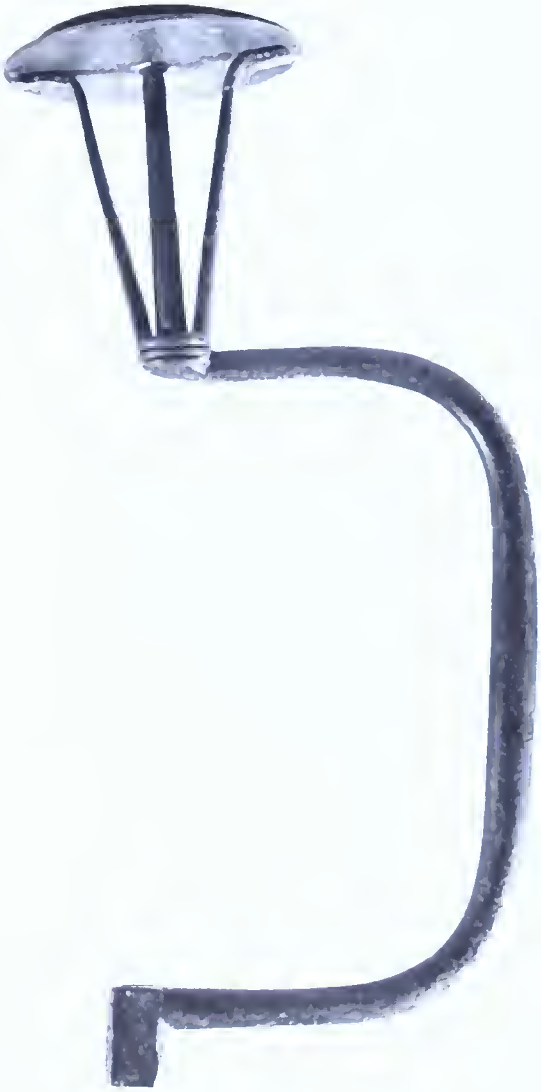
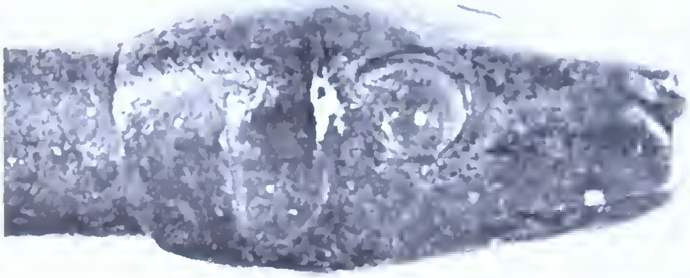


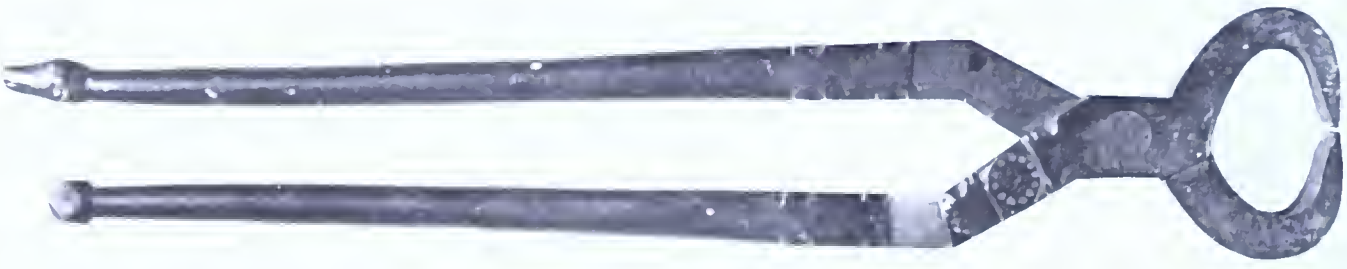
Plate 84. Carpenter's Brace; F 0.101

This example is completely hand wrought and is basically of the form of metallic brace found in the 18th and early 19th century. The chuck is rectangular and tapered, thus providing a tight fit for a bit made to fit snug in the chuck. Length 11¼″.

Plate 85. Blacksmith's Pincers; Anonymous Loan

Traditionally, these pincers were made and used by a blacksmith named E. Meninger, who worked in the village of Clay in Lancaster County, Pennsylvania, during the late 19th century. The file work and punched decoration surrounding his initials are traditional techniques of embellishing wrought-iron artifacts. The impulse to apply zoomorphic figures, as here in the dog's head, is lost in the mists of antiquity.
Length 16¼″.





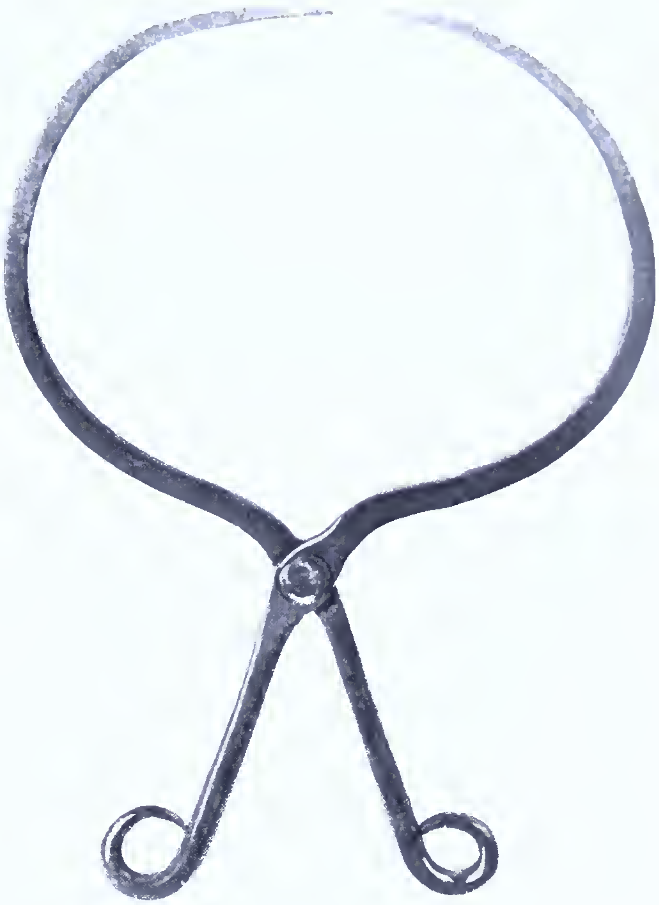
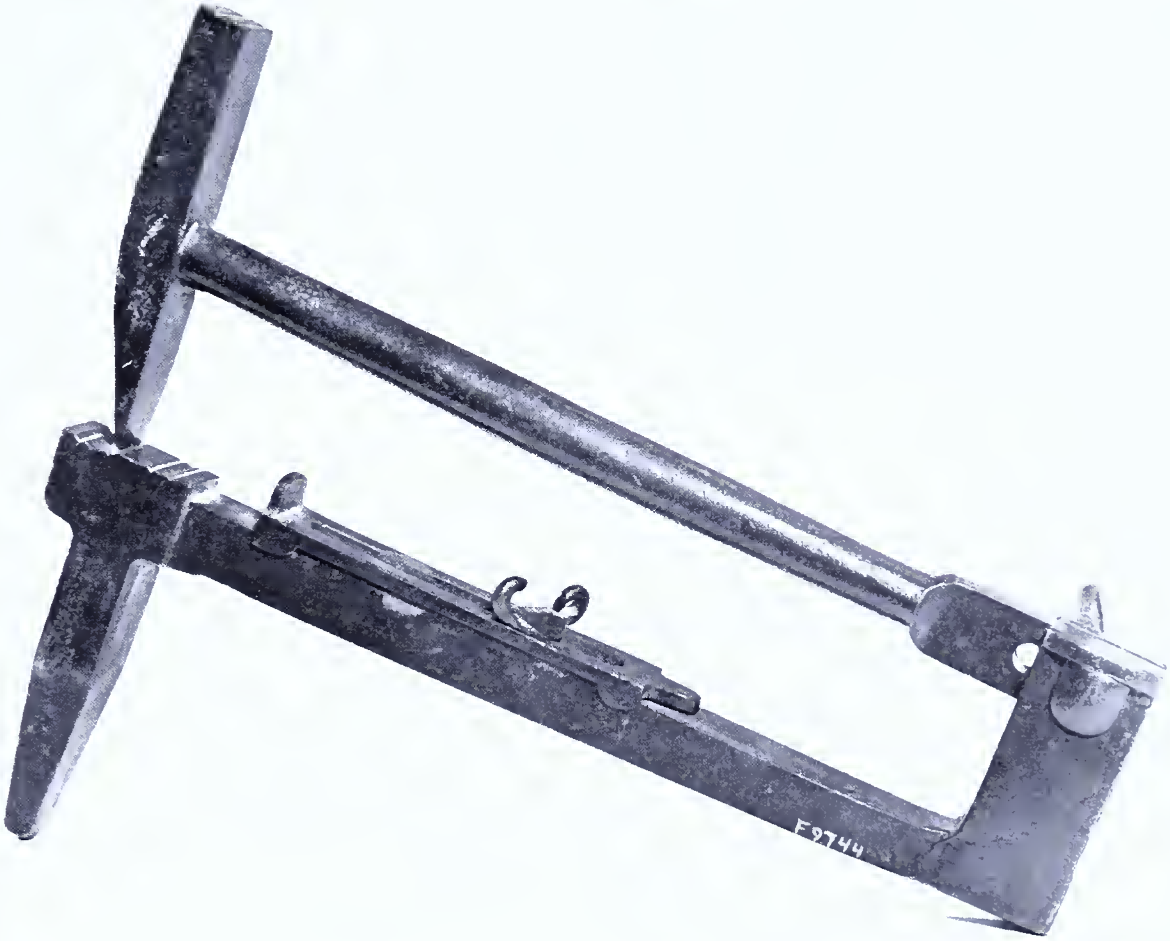
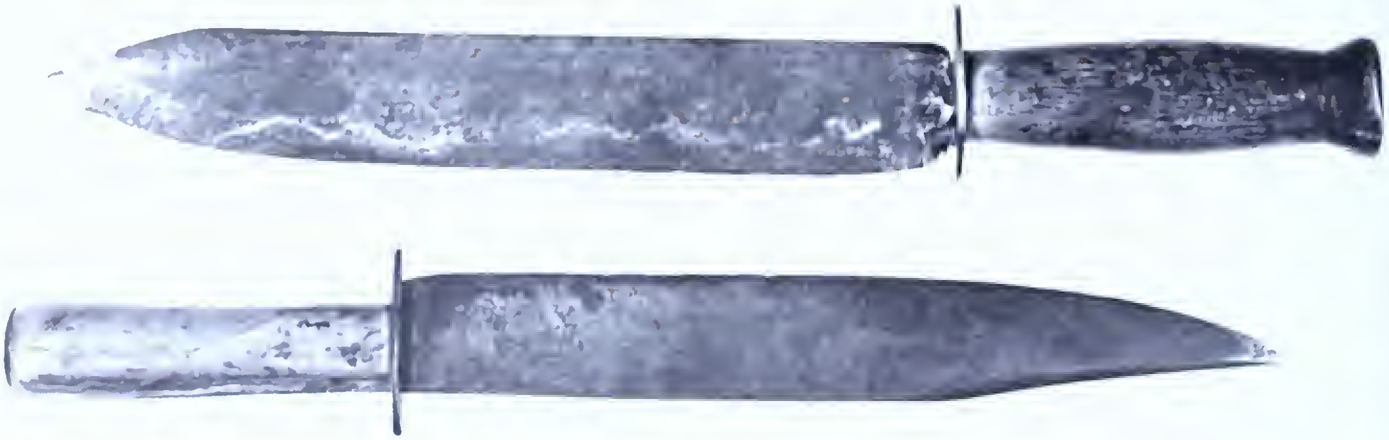


Plate 86. Calipers; F 11.632
Calipers were an important measuring device in many trades, including blacksmithing, wood turning, tinsmithing, and milling. This example, all hand wrought, calibrates from ⅝″ to 4⅛″. Probably 19th century.
Length 9¼″.

Plate 87. Creasing Swedge; F 9.744
An essential tool employed by the tinsmith for making a crease or furrow on tinplate. This well-made example is signed "J. and E. North, Berlin, Conn." The initials J and E are for Jedediah and Edmund North, two brothers who were blacksmiths who specialized in toolmaking. They sold, repaired, and made tools of all types in the first half of the 19th century.
Length 14½″.





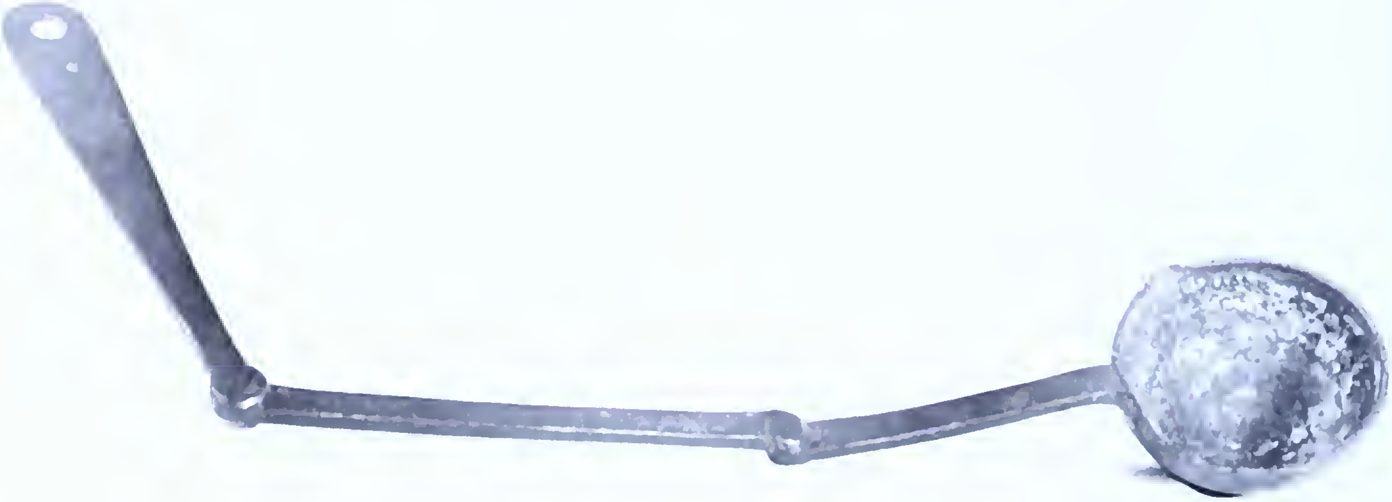


Plate 88. Hunting Knives; F 3.167 and F 3.166

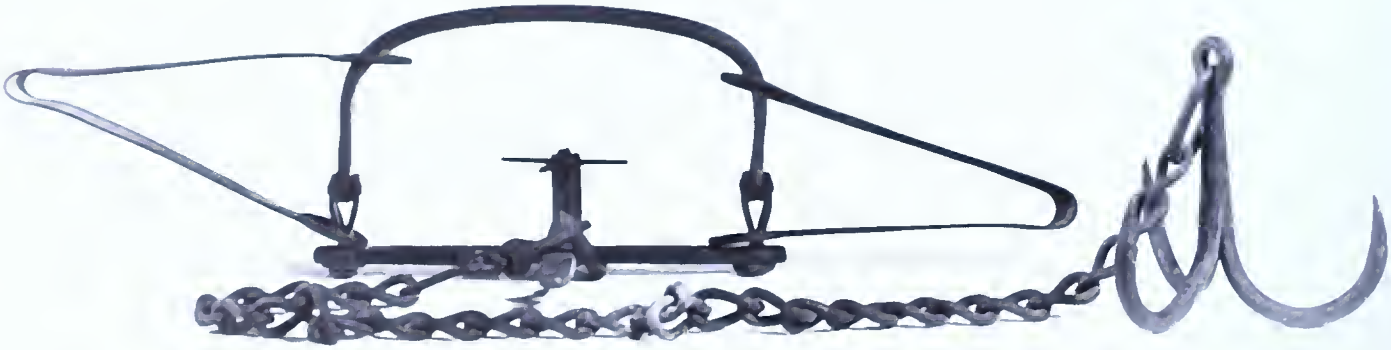
Both knife forms are often referred to as "Bowie" type knives. Such knives were standard equipment of hunters, and they were also carried by foot soldiers during the Civil War. The blacksmiths who made these knives were experts at the difficult process of tempering. Both are 19th century origin.
Length 15½" and 16½" respectively.

Plate 89. Ladle with folding handle; F 8.801

The ladle was carried in the hunting bag and used for melting lead for rifle balls. Probably 18th century.
Length when extended 13½".

Plate 90. Bear Trap; F 11.717

The design of this example dates it from the last half of the 19th century. The general quality of the piece would indicate that it is the product of a smith who specialized in traps.
Length 32".



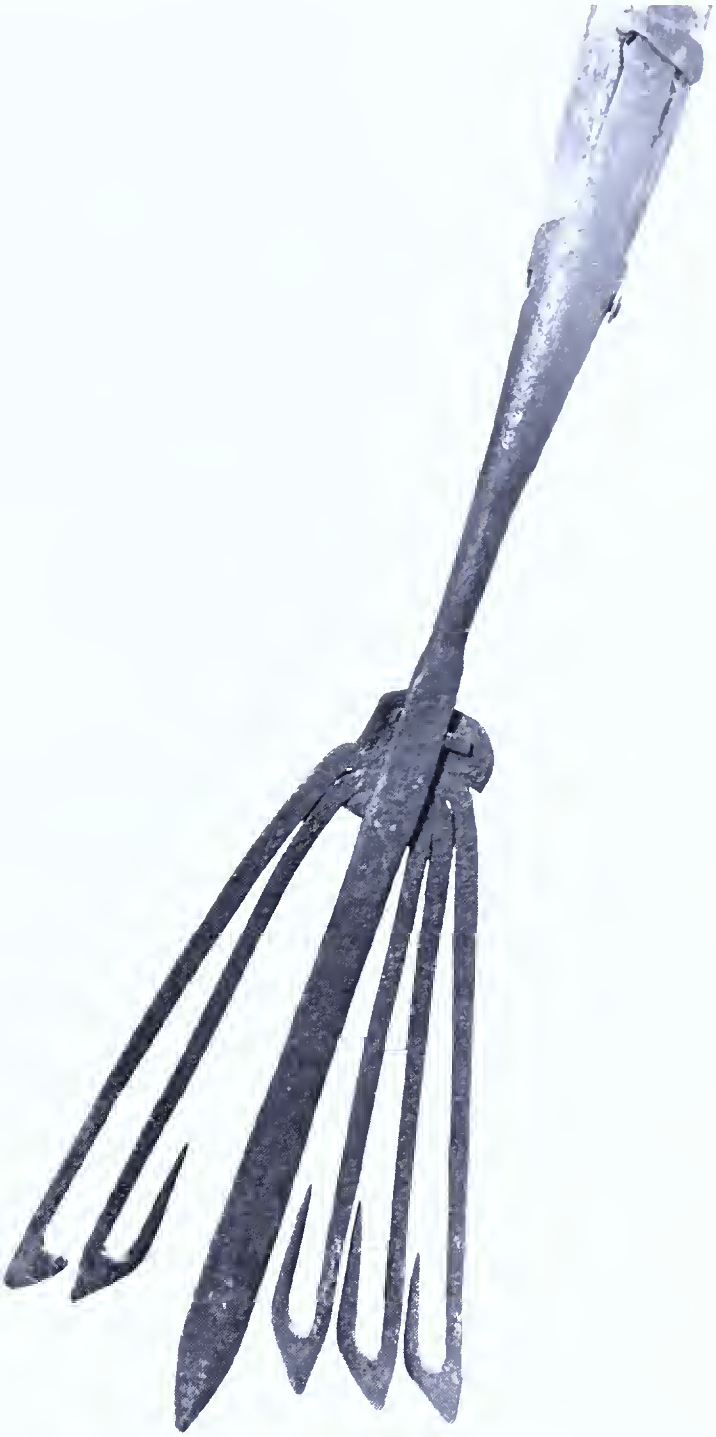
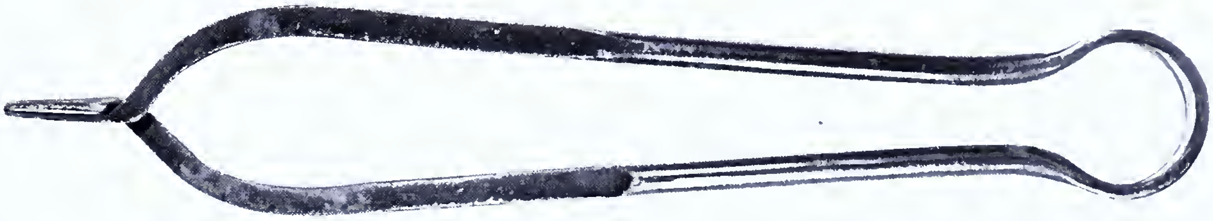


Plate 91. Fish Spear; F 11.699
Made of separate pieces of iron gathered and bent through a mortise in the center spear and wedged tightly. Its large size would indicate that it was used to spear large game fish such as gar. 19th century.
Length 2′ without wooden handle.

Plate 92. Tongs; F 21.532
The precise use of these tongs is unknown to us. It has been suggested that they were used in glassmaking. Their functional form, a design in simplicity, justifies their inclusion in this catalog of blacksmith-made artifacts. Probably 19th century.
Length 13⅝″.



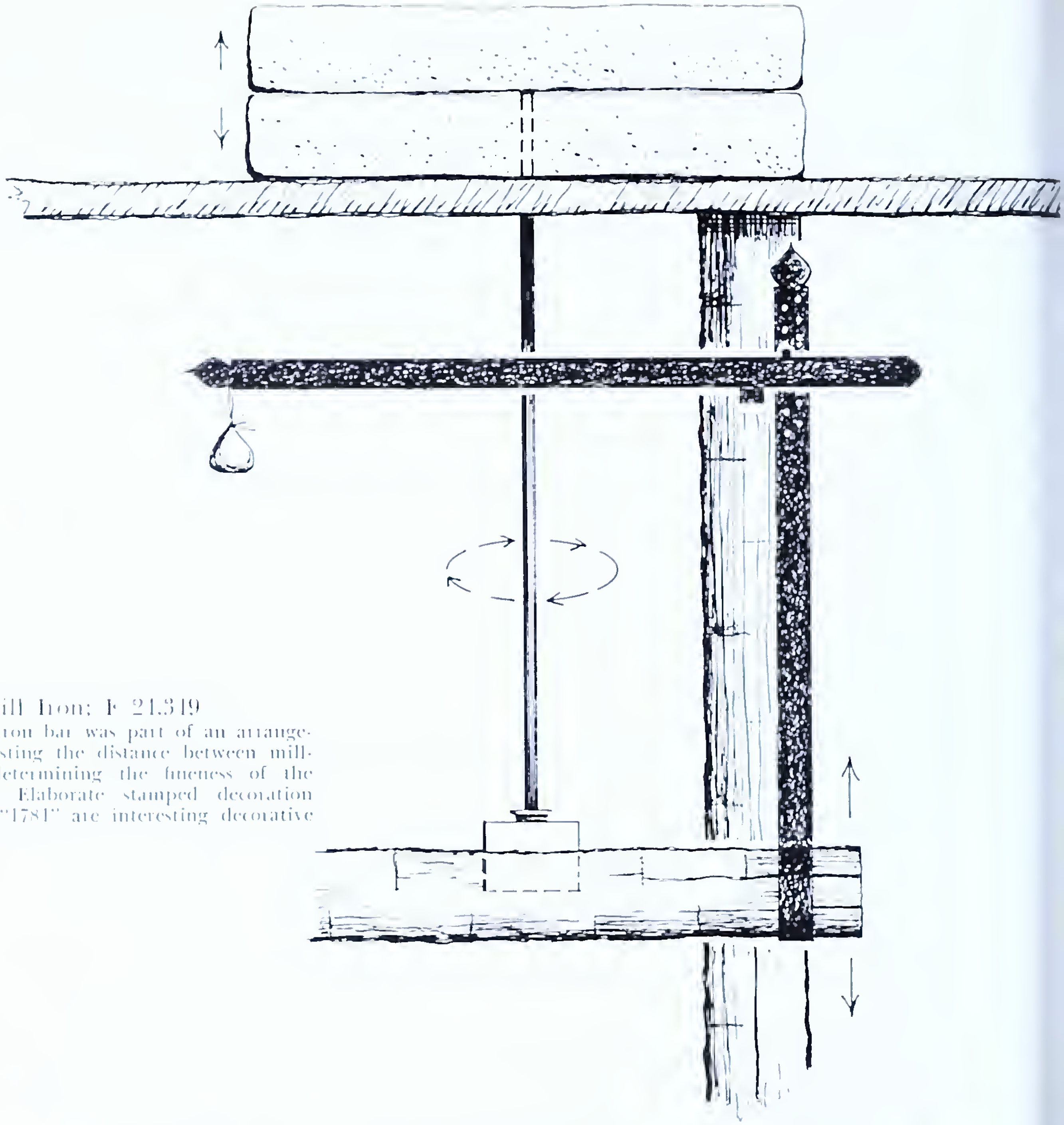
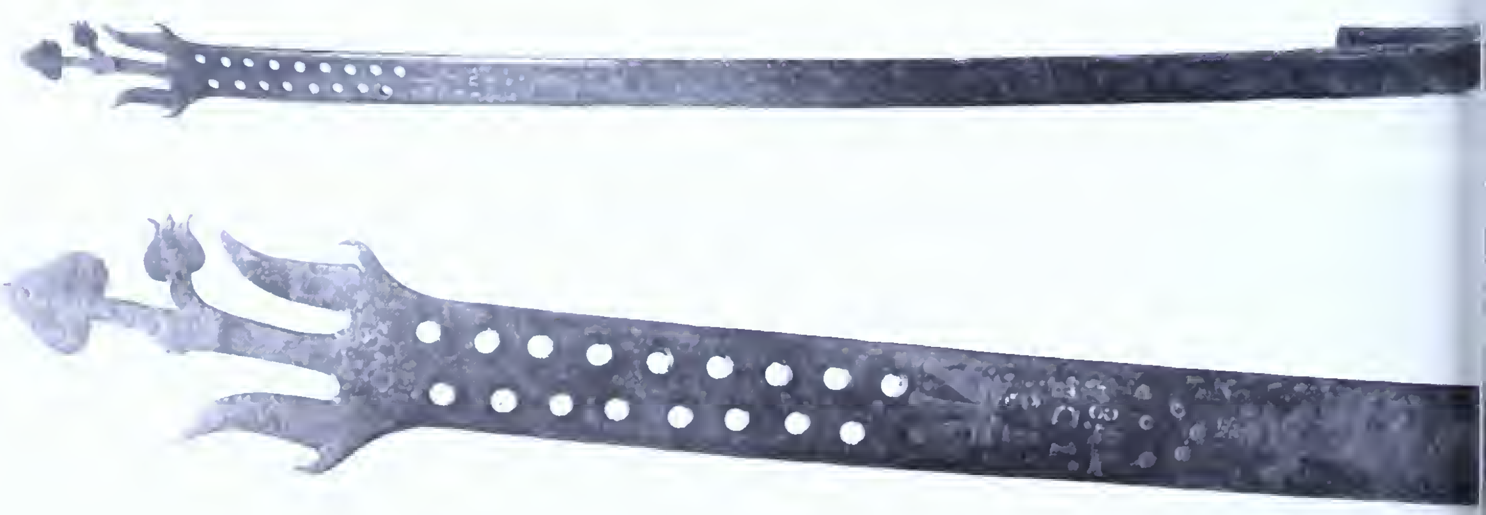


Plate 93. Mill Iron: F 21.319
This wrought iron bar was part of an arrangement for adjusting the distance between millstones, thus determining the fineness of the ground flour. Elaborate stamped decoration and the date "1781" are interesting decorative touches.
Length 5' 10".



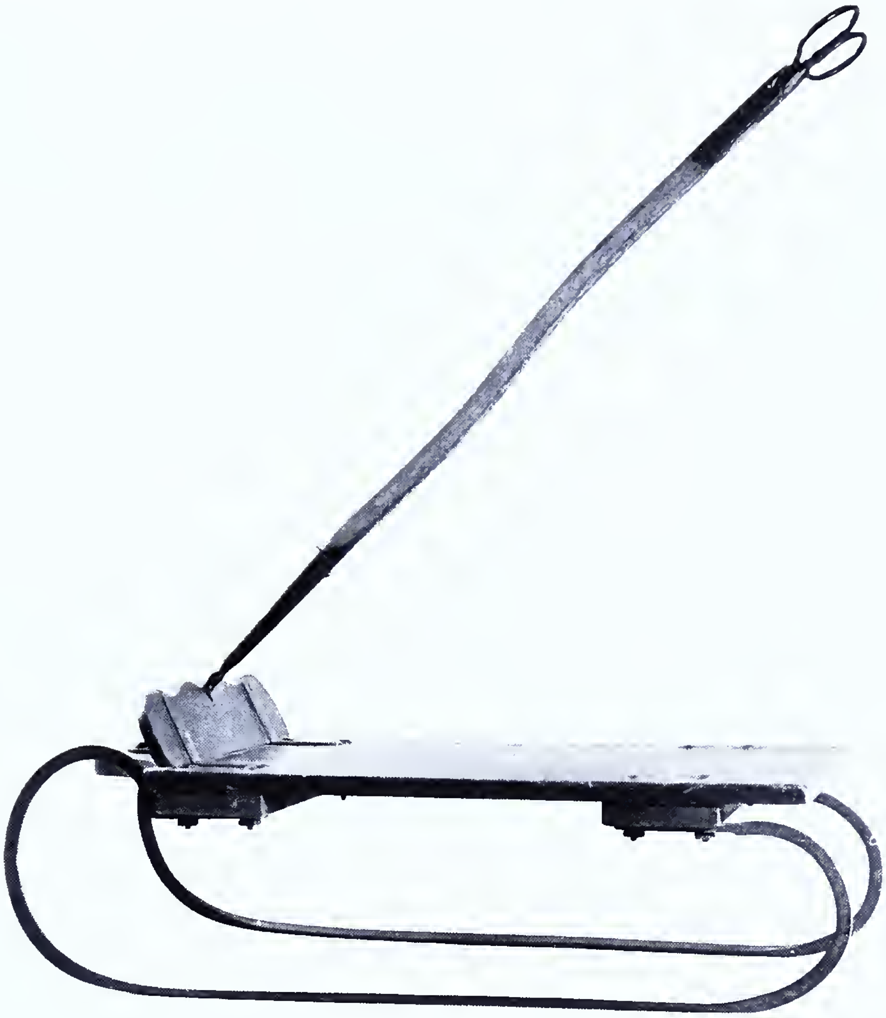
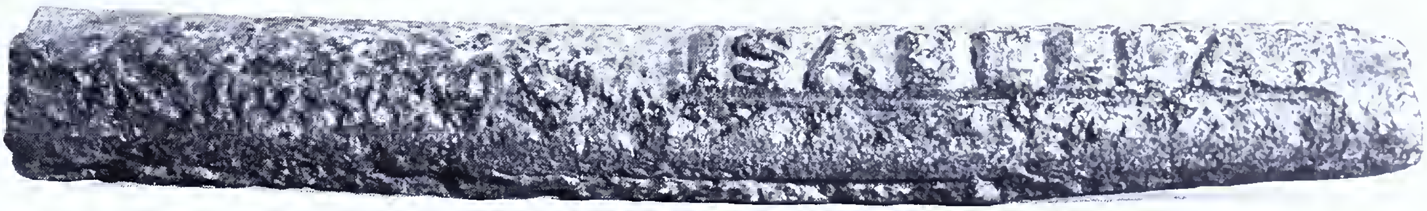


Plate 94. Child's Sled; F 24.355

Undoubtedly, a loving father either took great pains to make this sled or supervised its construction. Walnut wood was used for the body and was complemented with skillfully wrought ironwork, namely, the runners and handle parts. The grip is heart-shaped. Last half of the 19th century.
Length 28¼″.

Plate 95. One half of a Cast-Iron Pig; F 9.652

Iron ore, smelted in the blast furnace, was run in molten form into bars or pigs. This example was cast at Isabella Furnace near Morgantown, Pennsylvania, in the early 19th century.
Length 28″, diameter 3″.



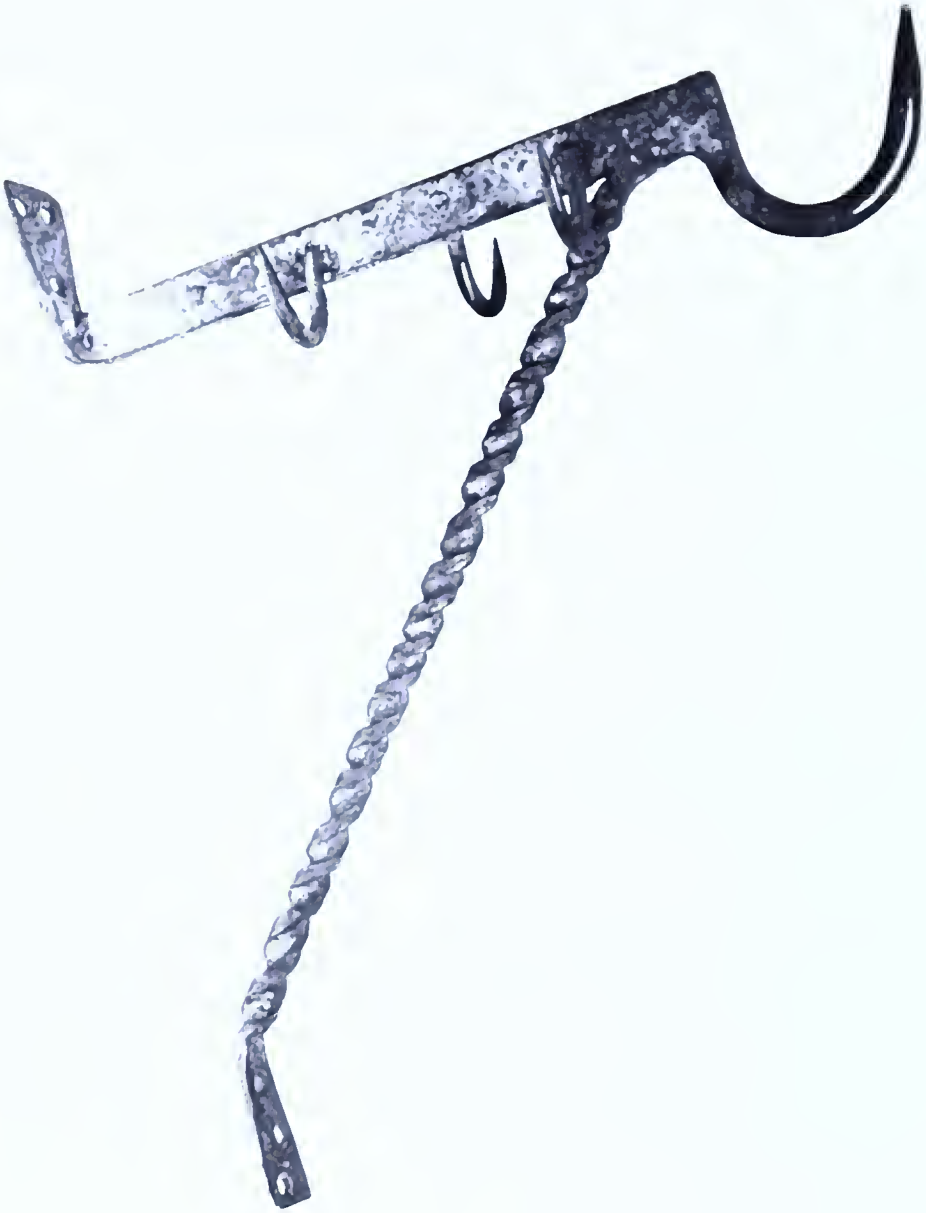


Plate 96. Meat Hook; F 24.348
This example is made from heavy iron stock incorporating a skillfully twisted support. 19th century.
Height 22¼".

Plate 97. Puzzle; F 24.370
A whimsical form of amusement, the object was to remove the larger ring completely from the puzzle. We like to think that this gadget was made by a blacksmith in his spare time. Probably late 19th century.
Length 12".

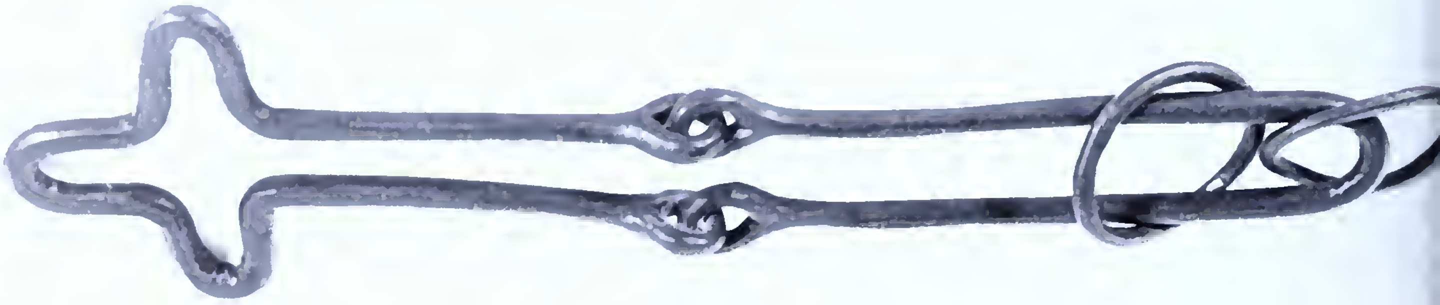
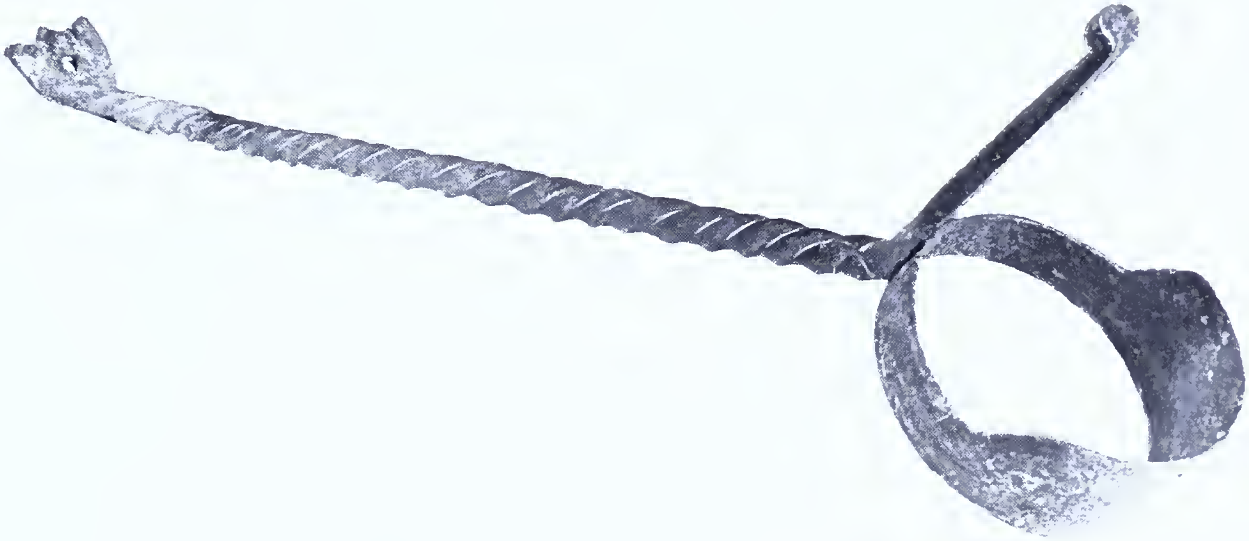


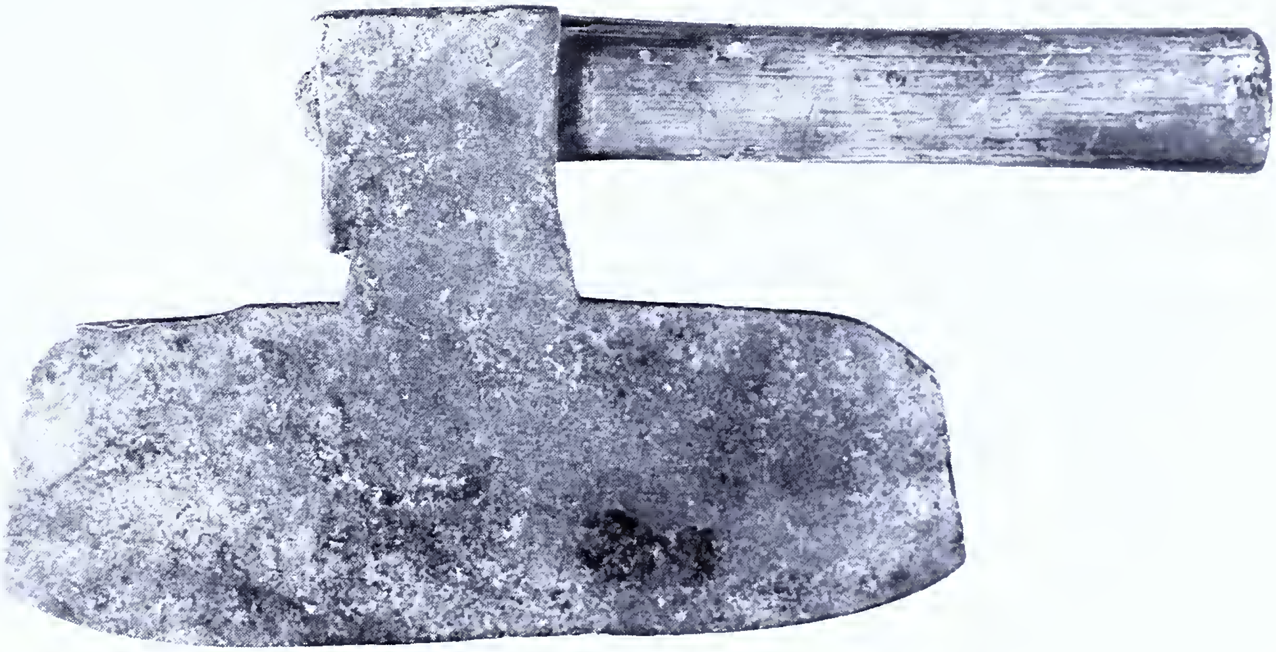
Plate 98. Pump Spout Bracket; F 24.343

For supporting the extended spout on a wooden water pump. This is another example of a utilitarian device provided with embellishment, thus reflecting the skill of its anonymous maker. Probably 19th century.
Length 21½″.

Plate 99. Carpenter's Hewing Hatchet; F 24.396

The carpenter's hewing hatchet is a smaller version of the broadaxe and was used for dressing and trimming timbers. "D. Pugh" is stamped in two places on the blade. Probably 19th century.
Length of blade 9½″.





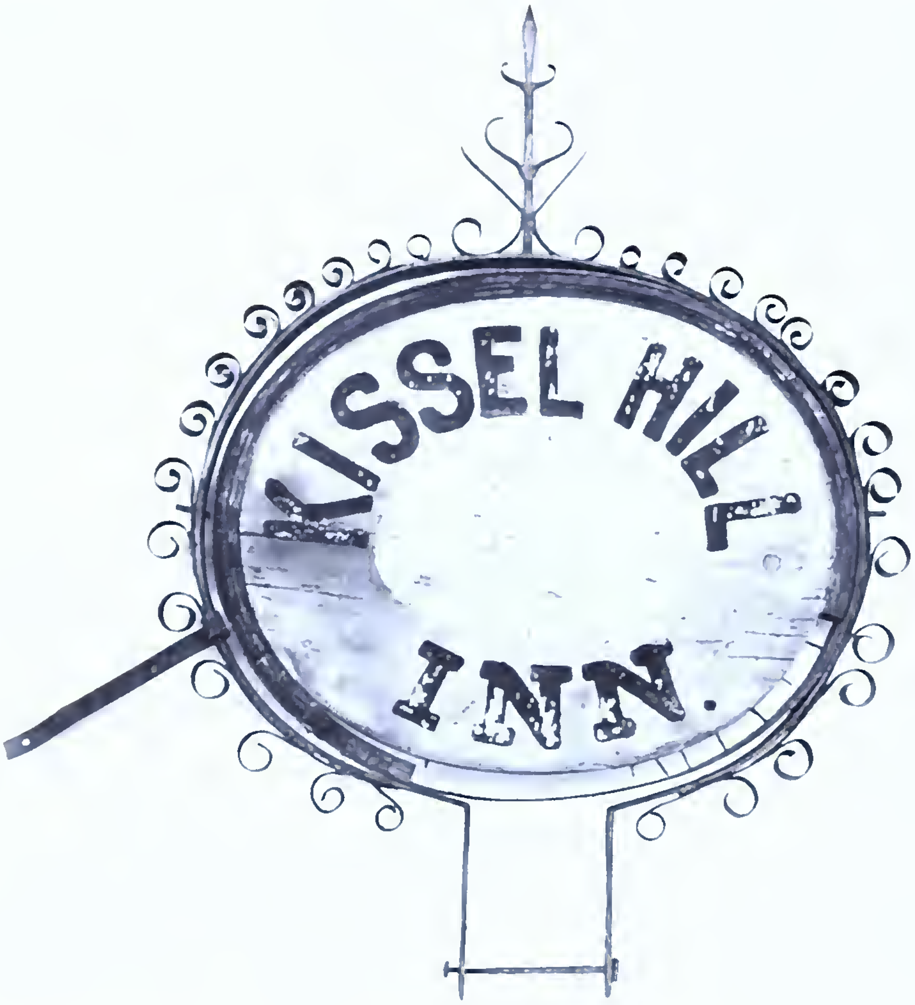
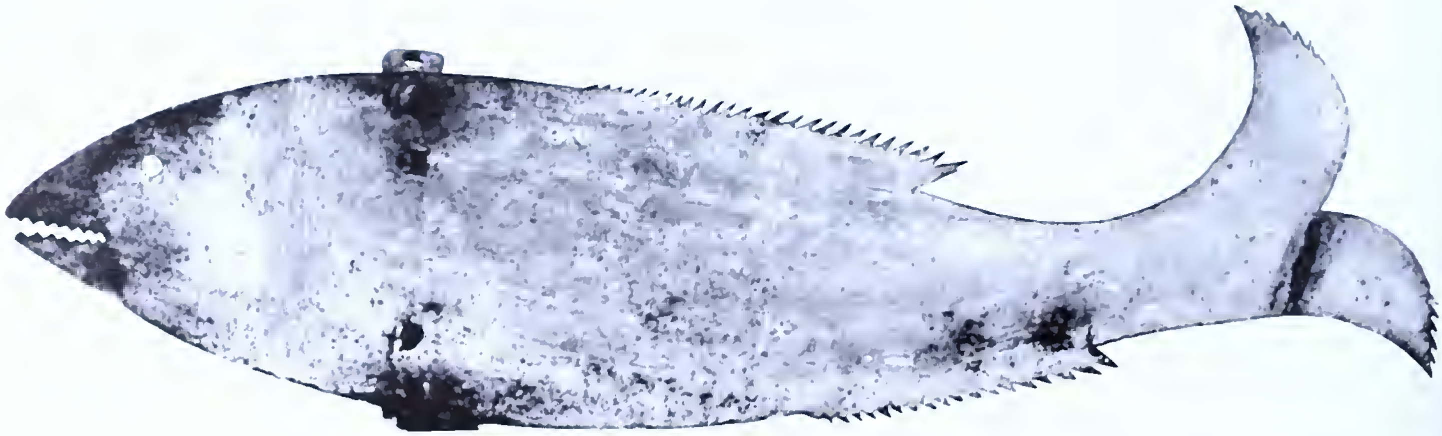


Plate 100. Inn Sign; F 24.366
The Kissel Hill Inn was located a short distance from Landis Valley between Lancaster and Lititz. The sign is made to be mounted atop a post and is unusually decorative. Mid 19th-century origin.
Dimension of sign 30″ × 25″.

Plate 101. Sheet-Iron Weather Vane; F 4.163
Remnants of the painted finish reveal this graceful example was originally painted white and brown. Late 19th century.
Length 31¾″.



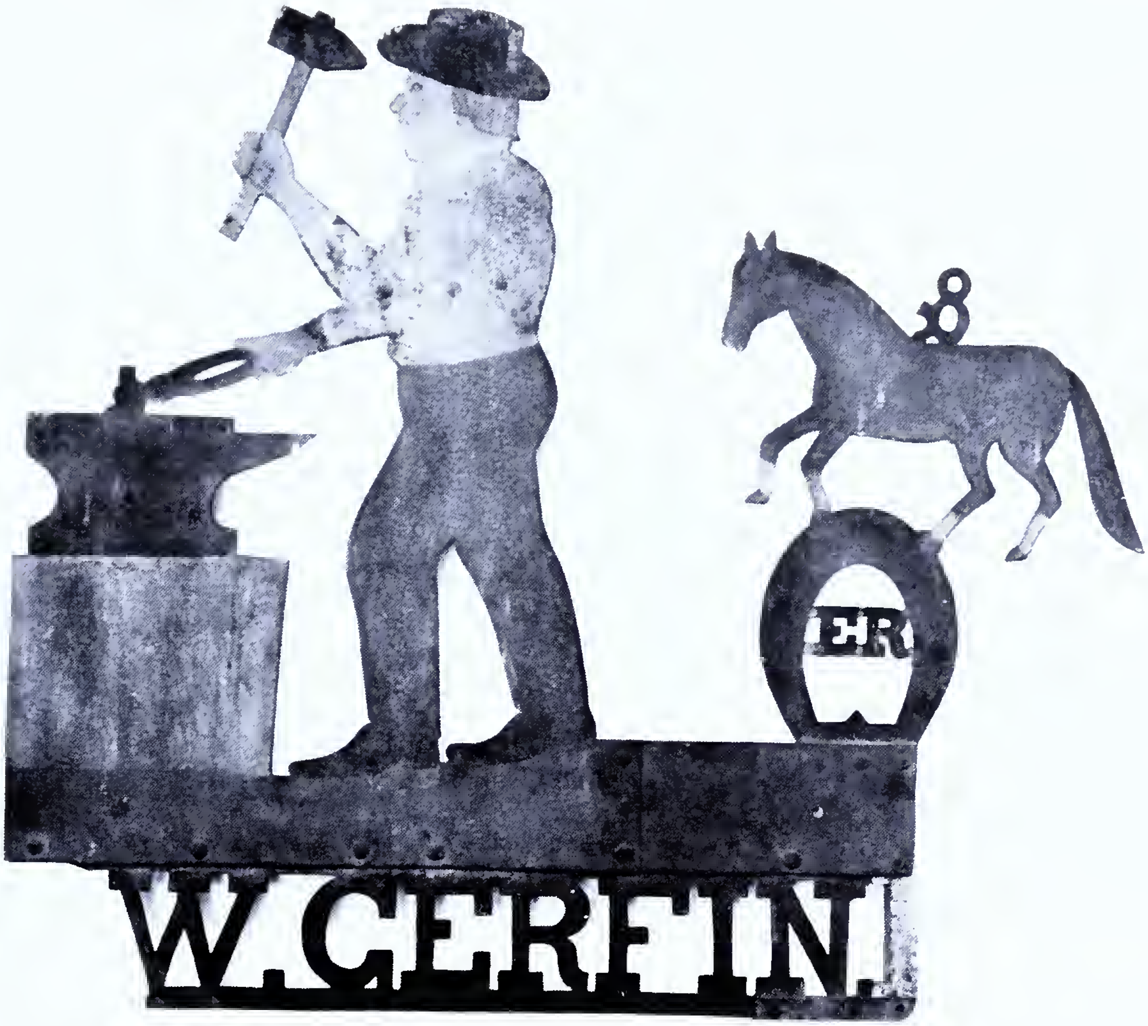


Plate 102. Weather Vane; F 11.604
This example served in a double capacity of revealing wind direction and designating the location of a blacksmith's shop. The delightfully contrived rebus informs us that W. Gerfin was a blacksmith and horseshoer. In earlier years, both were practiced as separate trades, but by the latter decades of the 19th century, when this weather vane was made, it was common for one man to carry on both functions. Overall length 32″.

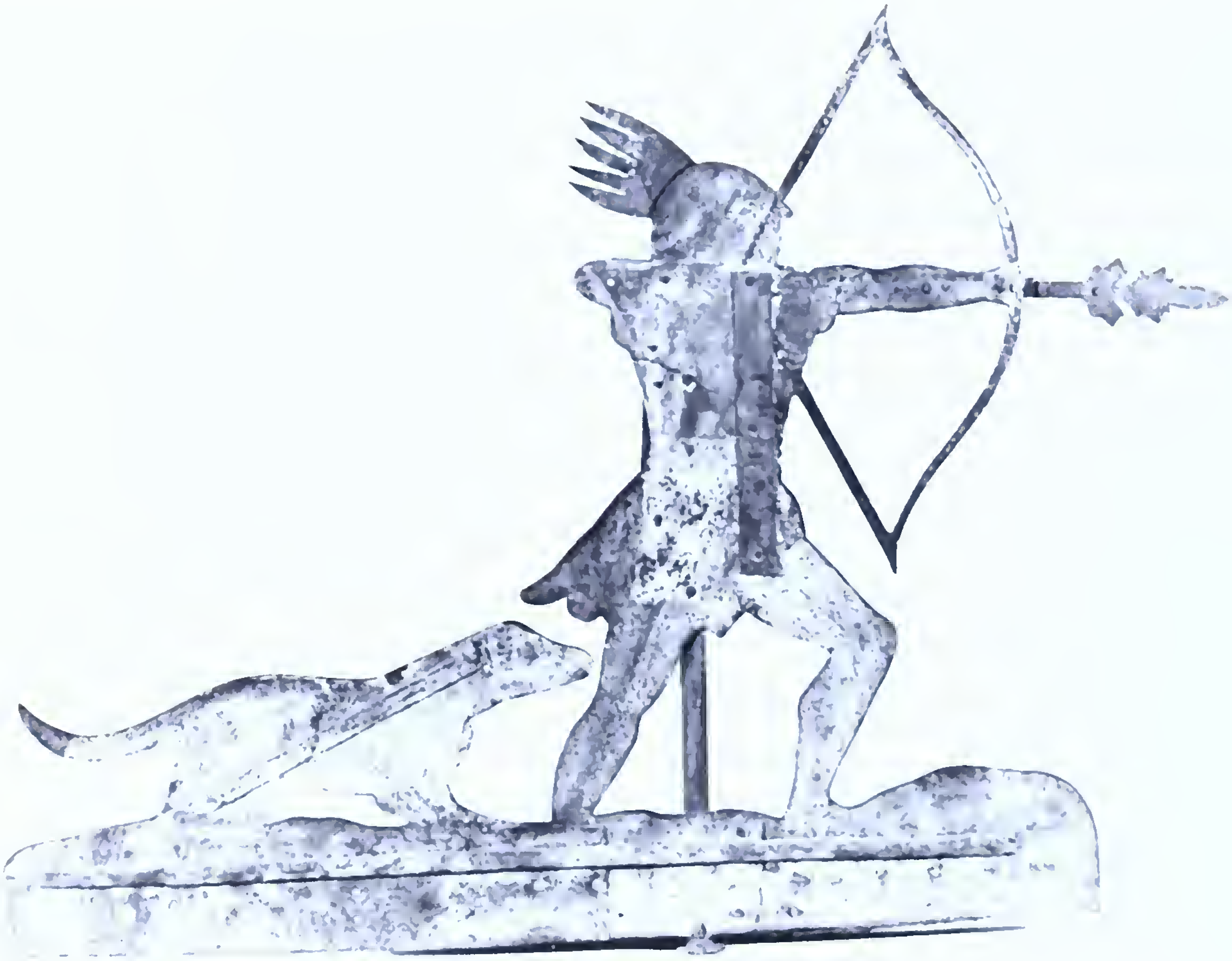


Plate 103. Weather Vane; F 11.603
The Pennsylvania Farm Museum has several exceptionally fine weather vanes in its folk art collection. This example, depicting an Indian and dog, is made of sheet iron, probably in the last half of the 19th century, and retains a portion of an old painted finish of white, yellow, and blue. Weather vanes, when found on the farm, were frequently mounted on the roofs of out buildings such as barns, silos, and tobacco sheds.
Overall length 49".

On front cover
cat. no. 102. Weather Vane; F 11.604

On back cover
cat. no. 103. Weather Vane; F 11.603

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